T-26 LIGHT TANK

Backbone of the Red Army

STEVEN J. ZALOGA ILLUSTRATED BY HENRY MORSHEAD

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NEW VANGUARD 218

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INTRODUCTION

The Vickers 6-ton Tank was the most influential tank design of the inter-war years. It was exported to numerous countries around the world, and inspired many foreign tank designs. Most importantly, it was license-produced in the Soviet Union as the T-26 light tank. More T-26 tanks were manufactured than any other tank of the 1930–40 era, and more were produced than the combined French and German tank production during this decade. Its combat debut during the Spanish Civil War sealed its reputation as the premier tank of the inter-war years. The T-26 light tank made up the bulk of the Red Army tank force on June 22, 1941, at the time of the German invasion. By this time, the T-26 was past its peak, and the Soviet tank fleet was debilitated by serious maintenance problems and poor crew training. The enormous tank park, built up at such great expense in the previous decade, largely evaporated under the merciless advance of the German blitzkrieg. Small numbers of T-26 tanks continued to soldier on in 1942, but they became increasingly rare on the Russian battlefield. Several hundred T-26 tanks remained isolated in the Soviet Far East, and these did see a brief moment of glory in the final campaign against the Japanese army in Manchuria in August 1945.

A T-26 Model 1933 radio tank on Red Square in Moscow for the May 1935 parade. These displays were usually conducted by the 12th Tank Regiment of the elite 1st Moscow Proletariat Division, stationed near the city. Overhead is a massive ANT-20 Maksim Gorkiy bomber, which crashed moments later when one of the accompanying I-5 fighters smashed into it during an impromptu maneuver. This is an early production version of the single-turret tank with the exposed headlight and the siren located on the left hull side.

DEVELOPMENT

The British armament firm Vickers-Armstrongs had been involved in tank production since World War I. In the 1920s it manufactured tankettes and light tanks with an emphasis toward commercial export sales. Britain had a reputation as a pioneer both of army mechanization and armored fighting vehicle (AFV) design, and Vickers had a seasoned worldwide sales force. In the late 1920s, to expand its tank portfolio, the firm developed its

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6-Ton Tank, also known as the Mark E, with a prototype appearing in 1928. An associated advertising brochure described it as "the best possible combination of firepower, mobility and protection." Several versions were offered, including the Type A "trench sweeper" with twin machine-gun turrets, and the Type B "fire-support tank" with a single turret armed with a short 3-pdr (47mm) gun. The tank was lightly armored to a maximum of a half inch (13mm), and offered good cross-country speed and mobility compared to World War I designs. The British Army examined this tank, but rejected procurement, judging the suspension to be too noisy and insufficiently robust.

Vickers 6-Ton Tank Export

Country	Year	Quantity
Poland	1930	38
Soviet Union	1930	15
Bolivia	1931	3
Thailand	1932	22
China	1935–36	20
Bulgaria	1937	8
Finland	1938	34

The Soviet Union had begun to manufacture tanks in 1920, starting with a few handmade copies of the Renault FT. This was followed in 1926 with the first series-manufactured tank, the T-18 (MS-1), a modestly improved evolution of the Renault FT. Development of a broad range of new tanks was undertaken in the late 1920s as part of an ambitious program to mechanize the Red Army. Moscow purchased an improved version of the Renault FT, the Renault NC tank, which led to the development of a Soviet derivative, the T-19. In August 1930 the Revolutionary Military Council (RVS) released a protocol covering tank production for 1931–33, which called for the manufacture of an astonishing 6,970 AFVs including 1,100 K-25 (Carden-Loyd) tankettes, 4,270 T-19/T-20 light tanks, and 1,600 T-24 medium tanks. To put this in some perspective, total worldwide production during these years was barely 900 tanks.

An early field exercise in 1933 with one of the new twin-turret T-26 tanks with its predecessor, the MS-1 light tank, in the foreground.

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A good example of a T-26 Model 1931 twin-turret tank with riveted hull construction currently preserved at the Memorial Museum at Poklonna Gora outside Moscow. The machine-gun mounts are museum recreations. This particular tank was recovered from the Neva river in 1989 near the village of Nevskaya Dubrovka on the outskirts of Leningrad.

There was some recognition that Soviet tank designs of the time were not cutting-edge technology. In 1929, the RVS created a special tank commission to tour European and American arms manufacturers to purchase more modern tank designs. The commission was headed by Innokentiy Khalepskiy, the head of the Red Army's Mechanization and Motorization Directorate (UMM), and tank designer Semyon Ginsburg. The firms that were visited included Krauss-Maffei and Linke-Hofmann in Germany; Somua, Schneider, and Citroën in France; Vickers in Britain; Škoda in Czechoslovakia; and Christie, Cunningham, and Timken in the United States.

Vickers made the biggest impression, since the firm had a broad range of tanks that were available for immediate sale. The Soviet government decided to purchase 26 Carden-Loyd Mark VI tankettes, eight Amphibian Light tanks, 15 6-Ton Tank Mark As, and 15 Medium Mark IIAs, along with production documentation. The contract for these tanks along with associated parts and technical aid was £205,000 (£5.6 million/$9.0 million today). The contract signing for the 6-Ton Tank took place without problems on May 28, 1930, since it was a commercial export design, but the remainder of the contract was delayed into 1931 since the tankettes and Medium Mark IIs had been acquired by the British Army and were not yet cleared for export.

Some of the twin-turret T-26 tanks were fitted with the 37mm PS-1 gun in the right turret, a Soviet derivative of the French Hotchkiss. This is an early example, as most tanks were eventually fitted with an additional armor plate to cover the mantlet. This also provides a glimpse of the early style of Soviet tanker's helmet.

Delivery of the 6-Ton Tanks began in September 1930 and concluded in January 1931. They were locally known as the V-26, with the "V" indicating Vickers. The UMM was interested in the V-26 as the basis for infantry mechanization. Two Christie tanks had been purchased in the United States and were earmarked for cavalry mechanization. The main rival of the V-26 was the T-19 light tank, which had been developed by the embryonic Soviet weapons development agency, the Armament Arsenal Trust (OAT), in conjunction with the Bolshevik plant in Leningrad. The Bolshevik plant was the new name given to the Obukhov plant, one of Russia's oldest and most experienced arsenals responsible for naval weapons and artillery. This plant was responsible for nearly all

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Soviet tank production in the 1920s, including most notably the T-18/MS-1 light tank.

Semyon Ginzburg was assigned to evaluate the V-26, and his report to the defense ministry in early 1931 concluded that the V-26 was a superior design to the proposed T-19, but that a better solution would be to combine the better features of both designs into a new hybrid called the TMM. The UMM was skeptical of the technical performance of the T-19, and balked at the projected price of R96,000 compared to the projected V-26 price of R42,000. Khalepskiy responded to the Ginzburg report with a warning that Soviet intelligence had learned that Poland was also planning to acquire the Vickers 6-Ton Tank and the Christie, and that with Anglo-French assistance it could have 300 6-Ton Tanks and 100 Christie tanks in service by year's end. This highly exaggerated threat assessment prompted Khalepskiy to recommend the immediate production of the V-26 in the Soviet Union, since a hybrid V-26/T-19 design would take years of work. In the event, the UMM allowed Ginzburg to continue work on the hybrid design as the TMM-1 tank, which combined the Vickers suspension, T-19 hull, and an imported American Hercules engine. It entered trials in February 1932 but was insufficiently superior to the Vickers tank to merit further consideration.

A good example of the variety of construction approaches in the twin-turret T-26. This tank has a welded bow and hull side, but riveted hull front and turrets. Such hybrid construction was not unusual since the Izhorsk plant used both riveted and welded construction simultaneously when producing major armor components.

Khalepskiy's argument won the day, and the V-26 was accepted for Red Army service on February 13, 1931, under the new designation T-26, to serve as the "standard support tank for combined arms units and the units of the High Command Reserve." The Bolshevik plant was ordered to produce 500 T-26s in 1931 with the assistance of nearby Leningrad plants including the Izhorsk steel works (hull and turret fabrication), Krasniy Oktyabr (Red October: transmission), and Krasniy Putilovets (Red Putilov: suspension). The initial hurdle was to convert the British design to metric. The first ten examples were built out of mild (unarmored) steel and were assembled in June 1931. They were nearly identical to the original Vickers design except for the substitution of the Soviet 7.62mm DT machine gun. Serial production began in August 1931 with a modified turret that was raised toward the rear to offer a vision port. By year's end, 120 tanks had been built of the planned 500, but the Red Army was willing to accept only 100 of them due to profound manufacturing flaws in some of the tanks.

A small number of twin-turret T-26 tanks were fitted with the 71-TK-1 radio with an associated rail antenna. The antenna proved awkward, and tank radios on the T-26 series did not become common until the arrival of the single-turret type in 1933.

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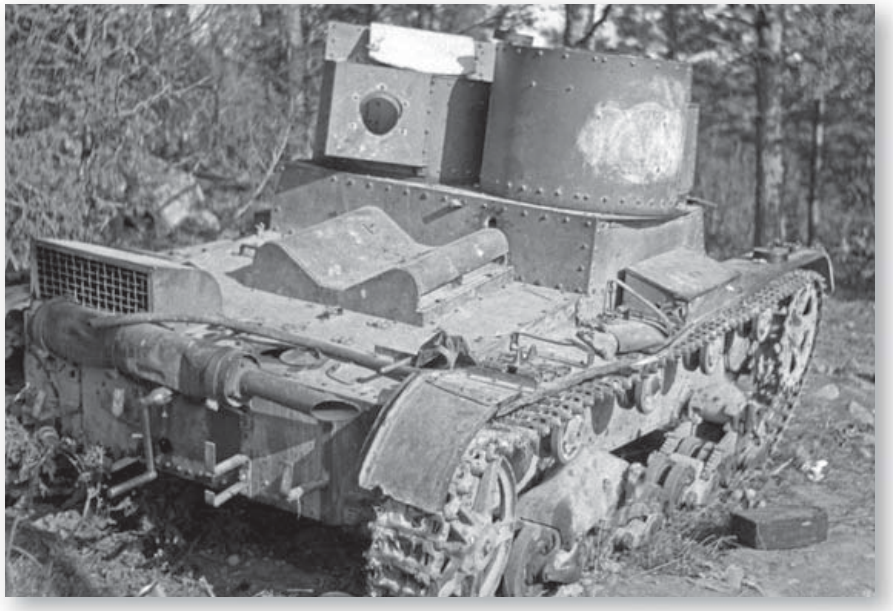
Production of the armored components for the T-26 at the Izhorsk plant utilized mixed construction techniques including both riveted and welded construction. The twin-turret T-26 in the foreground here shows the early riveted lower hull, but the turrets are of mixed types with one of welded construction and the other riveted. These tanks have undergone factory rebuilding and have later features such as the armored covers for the headlights and the siren repositioned on the front plate instead of the right side. These tanks were knocked out during fighting in Finland near Suur-Pero on September 8, 1941. (SA-Kuva)

Soviet industry had a great deal of difficulty adapting to large-scale tank manufacture of a modern design. The Izhorsk plant was unable to turn out armor plate of the prescribed 13mm thickness, and even the 10mm plate it produced had too many fractures and imperfections. The engines "gave off frightfully loud noise and then stalled." The road wheels shed chunks of rubber, the gears in the transmission stripped while under load, and the suspension springs cracked.

In 1932, the RVS released its "Great Tank Program," which included a short-term objective of manufacturing 3,000 T-26 tanks. To facilitate the program, the government started the construction of the new Voroshilov Plant No 174 in Leningrad (Leningradsko-mashinostroitelniy zavod No 174 imeni K. E. Voroshilova), named after the defense minister. Semyon Ginzburg was assigned to head the design bureau there, called the OKMO (Experimental Mechanical Design Department). A variety of changes were made to the design during the 1932 production run. The Izhorsk plant began efforts to shift from riveted towards welded construction. However, a lack of sufficient tools and trained personnel meant that some hulls and turrets were welded, some riveted, and some had mixed welded/riveted construction.

The Red Army hoped for better armament on the T-26, and from the outset there were plans to arm the right turret of one tank in five with a 37mm PS-1 Gochkis gun, the Soviet copy of the French Hotchkiss gun with a lengthened tube. Work was underway on an improved version of the PS-1 with an extended gun tube, the PS-2. A third option was the new B-3 37mm gun, a license-manufactured derivative of the Rheinmetall 37mm gun that was



Some of the older twin-turret T-26 tanks went through periodic rebuilding and received later features such as this example, knocked out during the fighting near Sairala, Finland on August 17, 1941. It has the "rumble seat" radiator cover introduced as a result of the lessons of the Spanish Civil War. (SA-Kuva)

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entering production at the M. Kalinin Artillery Plant No 8 in Sverdlovsk. In the event, of the 1,627 twin-turret T-26s that were manufactured, about 450 had the gun armament, mostly the short PS-1 but perhaps 20–30 with the B-3 gun. Another option that was tested was a Kurchevskiy recoilless rifle, but this scheme was rejected due to the enormous back-blast from the weapon and the need to reload the gun from outside the tank's protective armor.

Improved Firepower

The UMM had noticed the Vickers 6-Ton Type B fire-support tank with its 3-pdr gun, but felt that a more powerful gun would be more useful for close support. The favored weapon was either the 76mm Model 1927 regimental gun or the new 76mm Model 1927/32 tank gun in either a fixed superstructure or an enlarged turret. Two different turret designs were completed in 1932, the Dyrenkov design bureau's A-43 turret and Ginzburg's T-26-4. The A-43 design suffered from a cramped and inefficient interior, and so a test-batch of five T-26-4s was assembled at Plant No 174. In September 1934 during troop testing, a 76mm casing ruptured during firing, killing the turret crew and putting an end to the project. Curiously enough, the turret was redesigned for the BT cavalry tanks and later saw limited production as the BT-7A artillery tank.

While work was under way on a fire-support tank, the UMM proposed building a tank-destroyer version of the T-26 using a more powerful gun in a single turret. The obvious choice was the new 37mm B-3 gun. Ginzburg proposed making this tank the standard tank for the Red Army, but army chief Mikhail Tukhachevskiy continued to favor the twin-machine-gun option already in production. The Izhorsk plant proposed a new cylindrical turret with the B-3 gun as a universal mount that could be fitted to either the T-26 infantry tank or BT cavalry tank. It had a separate ball-mounted DT machine gun. Both welded and riveted turrets were tested, but the welded turret proved vulnerable to machine-gun fire and so was rejected. After trials in September–October 1932, the UMM accepted the design with the proviso that it be fitted with a bustle at the rear for ammunition or potentially to accommodate a radio. Production of a trial batch of ten turrets started at Izhorsk in January 1933, but in the meantime other developments had overtaken this project.

While the Red Army was satisfied with the Rheinmetall 37mm Model 1930 gun as an antitank weapon, there was some consideration of adapting it as a universal infantry-accompanying gun, suitable both for antitank defense and close fire support. For the latter role, the gun needed a better high-explosive fragmentation round. The most practical solution was to increase the bore, and this was done with the new 19-K 45mm gun developed at Kalinin Plant No 8 in Sverdlovsk on the basis of the Rheinmetall gun. The new high-explosive fragmentation round had 118 grams of TNT versus only 25 grams in the 37mm round. This weapon was accepted for Red Army service in May 1932 as the 45mm Model 1932 antitank gun. A tank version, the 20-K, was also developed, and in March 1933 it was mounted in one of the new Izhorsk cylindrical turrets.

Although not of the best quality, this photo, taken by a US Army military attaché in Moscow, shows one of the rare T-26-4 artillery tanks with the enlarged turret and 76mm gun on parade during one of the annual November parades in Red Square.

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A T-26 Model 1933 single-turret light tank currently preserved at the Central Armed Forces Museum in Moscow.

Due to the selection of this weapon by the infantry, it was inevitable that it would be selected over the earlier 37mm tank guns for purposes of standardization. However, the original Izhorsk turret was somewhat slapdash, and a new design by S. Ginzburg with an "integrated bustle" was developed at Plant No 174. Production of the new turret began in the spring of 1933, but no gun-armed tanks were completed until June due to delays in

A

1: KHT-26, 4TH MECHANIZED BRIGADE, BYELORUSSIAN MILITARY DISTRICT, SUMMER 1936

Soviet tanks were painted in a uniform "camouflage green" (*zeleno-zashchitniy*) which was standardized in 1938–39 under the designation 4BO. The pigment for this color was 40–60 percent ochre, 15–20 percent zinc chromate, 10–20 percent white lead, and 8–13 percent ultramarine pigments; the oil-based paint formula was established under state standards GOST 7814/753, consisting of 40 percent red lead or iron oxide, 55 percent linseed oil, and 5 percent oil-drying agent. A 4BO color sample in the 1948 edition of the state paint guide is closely equivalent to US Federal Standard FS 24098 (semi-gloss) and FS 34098 (lusterless). There was the usual variation from the standard; US Army samples taken from T-34 and KV tanks in 1942 were closer to FS 24052. Although there were experiments with camouflage patterns in the 1920s, the use of multicolor camouflage was rare on Red Army tanks through most of the 1930s.

The Red Army adopted a set of tactical markings based on colored triangles in 1927, and a new style with colored circles in 1929, both discarded in 1932 in favor of a more visible system. Under the 1932 system, tanks had two bands painted around the turret, a continuous stripe at the top indicating the battalion and a dashed stripe below it indicating the company. These were painted in colors to indicate the number of the subunit: 1st (red), 2nd (white), 3rd (black), 4th (light blue), and 5th (yellow). To identify subunits, this system could be accompanied by a hollow square carried on the hull side indicating the platoon and a number inside identifying the individual vehicle. So in this case, the bands indicate Tank No 3, Third Platoon, 2nd Company, 1st Battalion.

2: T-26 MODEL 1933, "BLUE ARMY" OPPOSING FORCES, KIEV MILITARY DISTRICT, SUMMER 1935

A variety of nonstandard markings were widespread in the 1930s, usually a local initiative. Tanks playing the role of "Blue Army" opposing forces (*uslovnogo protivnika*) during summer war games sometimes had large areas of the turret painted in white. In this case the turret bands have been pushed below to make room for the white upper sides. The bands indicate 3rd Company, 2nd Battalion, while the markings on the hull indicate Tank No 1 of First Platoon.

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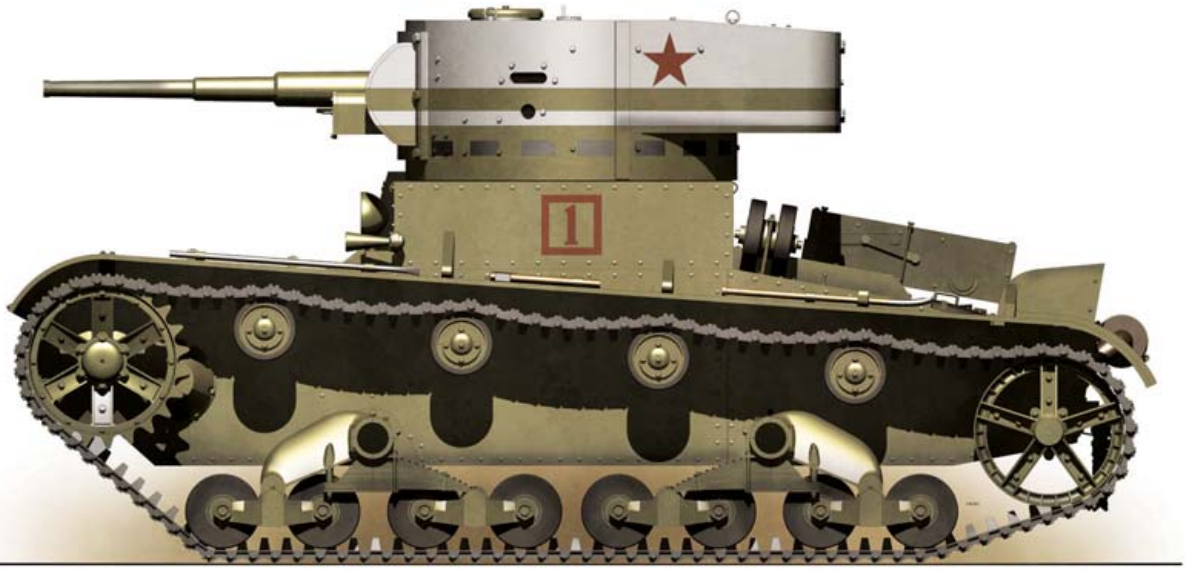

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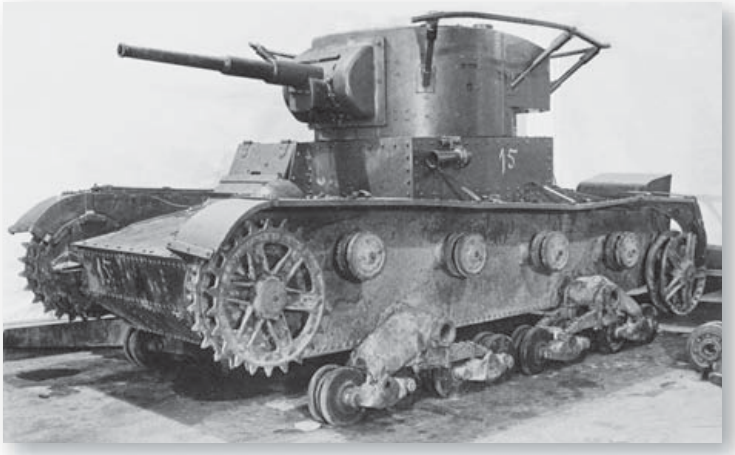

This is a T-26 single turret radio tank with its distinctive horseshoe rail antenna around the turret. This tank is from the 1933–34 production batches and has a riveted hull and the initial style of welded gun mantlet, and the siren on the left hull side. This tank was captured by the Finnish Army in the 1939–40 Winter War. (SA-Kuva)

manufacturing the new gun. The periscopic sights were not ready until the final quarter of 1933, further delaying their acceptance by the Red Army. This version of the T-26 is often referred to as the T-26 Model 1933, though this is a modern name adopted by tank historians. At the time, the two production runs of T-26 were distinguished simply as "twin-turret" (*dvukhbashenniy*) or "single turret" (*odnobashenniy*) T-26s.

The manufacture of the single-turret T-26 was hampered by the lingering immaturity of the new 45mm Model 1932 tank gun. This was in part due to poor manufacturing standards, which led to incessant failures of the automatic breech-block. The political paranoia of the day led to accusations of sabotage, and the OGPU special police, the forerunners of the later NKVD and KGB, set up a special "Sharaga" at Kalinin Artillery Plant No 8 in Sverdlovsk. This was a special design bureau/prison to which accused "sabotage engineers" were assigned. The improved version of the gun was sometimes designated as the 45mm Model 1932/34 tank gun, and it entered production in December 1933, largely solving the reliability issues.

Improvements to the 45mm gun turret began almost immediately at Plant No 174. The first major change was the introduction of a ventilation fan and an associated armored mushroom cover on the turret once it was realized that extended firing of the gun would asphyxiate the crew. In 1933, the UMM approved the deployment of the new 71-TK-1 tank radio on the T-26. Although there had been experimental fittings of this radio on the twin-turret T-26, it did not become standard practice until the arrival of the single-turret T-26. These tanks could easily be distinguished, since they were fitted with a prominent

A May Day parade in Kharkov in the mid-1930s. In the lead is a T-26 radio tank followed by rows of line tanks. These tanks were built in the 1935 period and feature the stamped mantlet. By this stage in production the headlight was mounted in an armored cover that could be folded down to protect the light when not in use. Note that the T-26 radio tank has a welded hull while the line tank behind it to the left is riveted.

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"horseshoe" rail antenna around the turret. The first of these were displayed on the November 7, 1933, parade in Red Square. These tanks did not receive a special designation, but were called "radio tanks" (*radiyniy tank*) versus "line tanks" (*lineyniy tank*).

A variety of small changes were made to the 45mm turret through the course of production. A stamped armor gun mantlet entered production in 1935, but production was insufficient for all new tanks. As a result, the welded mantlet continued to be used in parallel. In 1935, a special set of "combat lights" was fitted above the mantlet for night fighting. The plan was to equip one in five tanks with this pair of searchlights. In 1935 a machine-gun ball mount was added to the rear of the turret to provide better tank self-defense against infantry. In February 1936, Plant No 185 developed an antiaircraft machine-gun pintle for the DT machine gun and produced a small quantity for troop trials. This was not especially popular and a new, universal P-40 tank antiaircraft mount was developed that entered production in 1937. This was fitted on the right side of the T-26 turret with a special revolving hatch. An improved version, the P-40-UM, was introduced in 1938. These tanks were sometimes referred to as T-26 LTZ (*lineyniy tank zenitniy*: antiaircraft line tank) and T-26 RTZ (*radiyniy tank zenitniy*: antiaircraft radio tank).

A refueling operation in a tank battalion during summer exercises in 1936 from a BZ-ZiS-5 truck. The tanks include the usual mixture of T-26 45mm line tanks, a T-26 radio tank, and a single T-26 twin-turret.

A T-26 Model 1935 radio tank fitted with combat headlights above the gun, and followed by a KhT-130 flamethrower tank. The turret roof has a large Cyrillic "D" painted on it as a form of air identification marking.

Combat Debut in Spain

The T-26 saw its combat debut in 1936 during the Spanish Civil War. Stalin agreed to sell Spain a variety of military equipment, including tanks, to reinforce the Spanish Republic's army in their conflict against Franco's Nationalist forces.[1] The first shipment of 50 T-26 Model 1933s arrived in October 1936 and went into combat immediately with a mixture of Soviet "volunteer" crews and hastily trained Spanish crews. The first major use of the Republican T-26 took place on the morning of October 29, 1936, when a company of 15 tanks supported an attack by two infantry brigades against Italian and Spanish Nationalist units in the village of Seseña, on the southern approaches to Madrid. The attack was a failure due to poor coordination between the tanks and infantry. It also marked the first major

1 For more detail on T-26 employment in Spain see: Steven Zaloga, *Spanish Civil War Tanks: The Proving Ground for Blitzkrieg* (Osprey, New Vanguard 170, 2010)

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A T-26 Model 1935 showing the newer turret configuration with a stamped mantlet cover. Note also that even at this late date, hulls were still manufactured in mixed construction, in this case with riveted construction. This tank was lost in the fighting near Vitebsk on July 3, 1941.

tank vs tank skirmish, when the T-26 tanks ran into a small detachment of Italian CV-3/35 tankettes. The T-26 completely dominated the small, machine-gun-armed tankettes, which were nearly hopeless against the cannon-armed Republican tanks. In November 1936 there were the first confrontations with the newly arrived German tank detachment equipped with the PzKpfw I light tank. The T-26 proved to be much superior in these encounters, since the German tank was unable to disable the T-26 while the T-26 could easily penetrate the thin armor of the German tanks.

The Soviet advisory team in Madrid sent this assessment to the Kremlin concerning the role of the T-26 in the later fighting around Madrid:

> [The T-26] tanks created real miracles. It is possible to say with complete assurance that if the fighter group and [the T-26] tanks would not have been present during the first period of the defense of Madrid, the defense of the city would have been an exceptionally catastrophic situation. It is impossible to adequately describe the heroism of the tankers; they prevented the retreat of the infantry; they were always in the vanguard; they fought single-handedly with enemy gun batteries, and they demolished the battle plans of the opponent. They always took best advantage of the tanks in infringement of all technical and authorized norms and never refused or questioned orders to carry out a task. Tanks fought all day long, returned to the support area at night to repair the vehicles and during the morning returned to the fight.

By mid-December 1936, the small Republican tank force was largely spent, due not only to battlefield casualties, but also to the mechanical exhaustion of the tanks themselves. Tanks of the early 1930s were not very durable. The T-26 light tank required medium overhaul at district workshops after 150 engine hours, and factory overhaul after 600 hours. Tracks and track pins began to wear out after 500 miles of travel, side clutches became worn out, and the

B

1: T-26 MODEL 1933, BANDERA DE CARROS DE COMBATE DE LA LEGION, SPANISH NATIONALIST ARMY, 1938

The markings on Spanish Republican T-26 tanks tended to be very simple, usually limited to tactical numbers or letters. In contrast, the Spanish Nationalist Army tended to use very visible markings, especially with captured tanks such as this T-26. This is an early version of the Nationalist markings. A more thorough description of the evolving system is contained in Osprey New Vanguard 170: *Tanks of the Spanish Civil War*, Plate E.

2: T-26 MODEL 1933, 1 TANK TABURU, TURKISH ARMY, LULEBURGAZ, TURKEY, 1936

Some Turkish Army T-26s appeared in an overall sand color, but at least some were painted in a two-color camouflage as seen here. A local version of the Soviet style of turret markings was carried as seen here, but with "dots and dashes" instead of the Soviet styles of dashes. The vehicle registration was carried on a white rectangle on the center of the front and rear lower hull plates.

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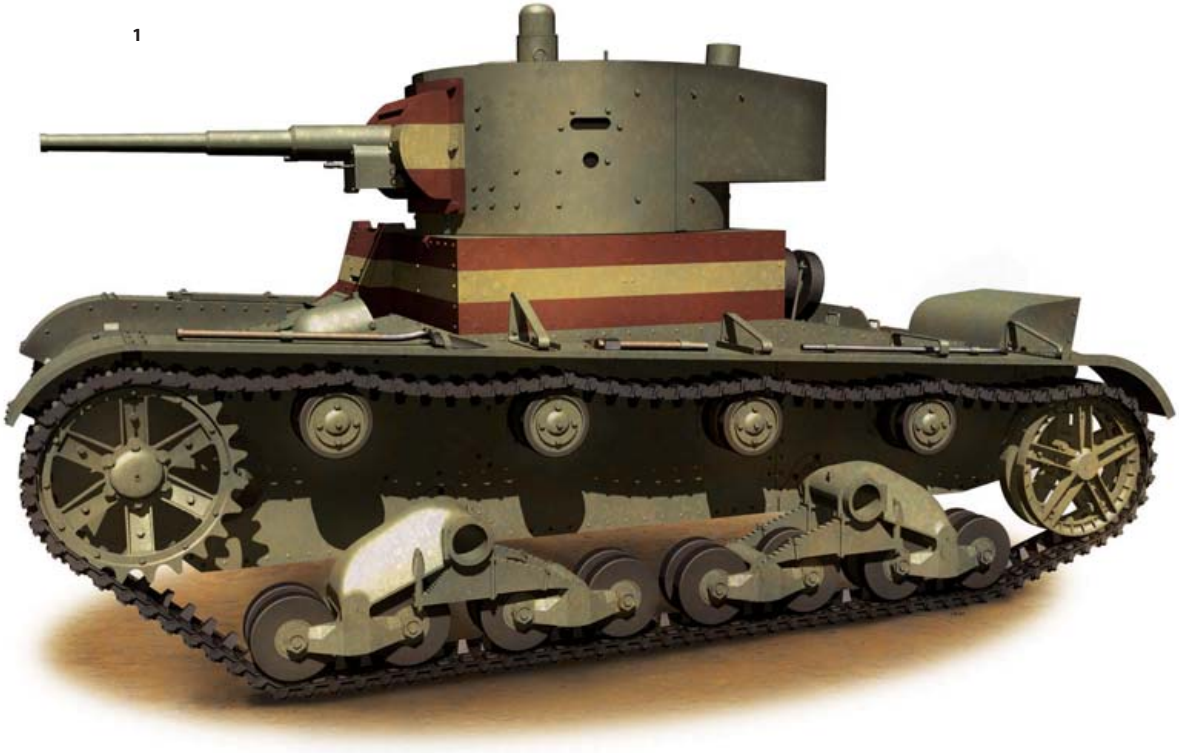

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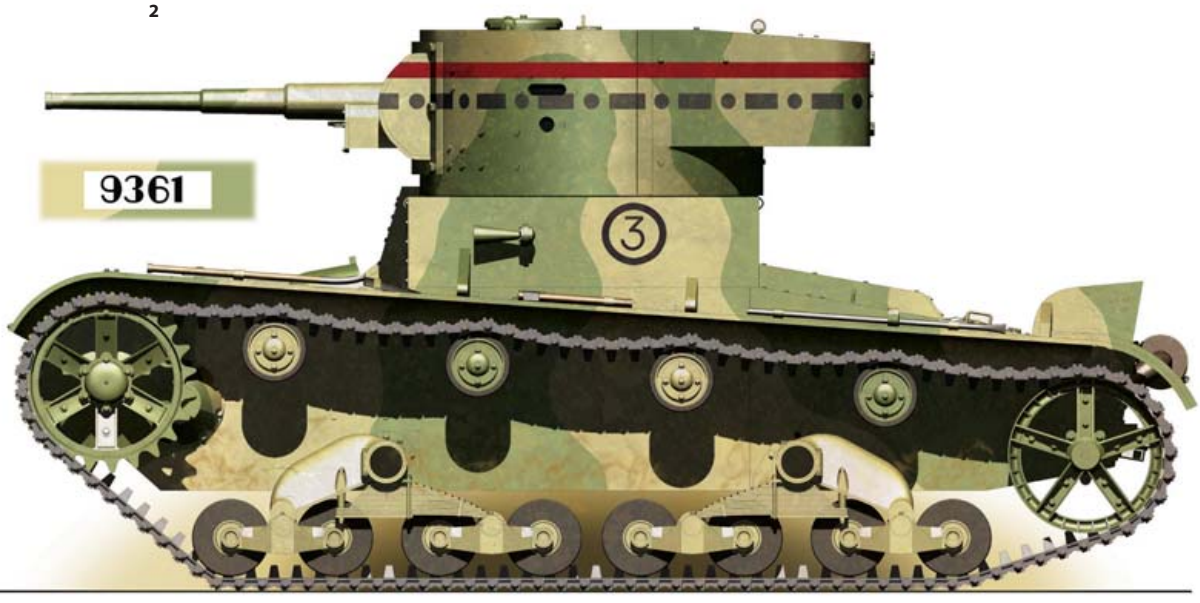

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The final delivery batch of T-26 tanks to Spain was of the single-turret T-26 Model 1937, which had the P-40-UM antiaircraft machine-gun mount on the roof. This Republican tank was captured by the Cuerpo de Ejército Marroquí (Moroccan Army Corps) of the Nationalist Army and was put on display with other captured equipment at an exhibit in San Sebastian in 1938.

power train was gradually knocked out of alignment from hard cross-country travel. In the desperate fighting during the defense of Madrid, the Republican tanks had accumulated over 800 operating hours by mid-December, far beyond the regulations, leaving many of the tanks inoperable. The inexperienced Spanish crews were unable to do field repairs, and their unfamiliarity with tank driving led to high rates of clutch and power-train failures. It became clear from the initial fighting that tank units could not be employed nonstop, day and night like infantry could, and had to be carefully husbanded for only the most important missions.

As the Spanish Civil War intensified, Stalin agreed to reinforce the Spanish contingent with a second wave of crews and tanks. About 200 Soviet tank crews and tank specialists arrived on November 26, 1936, commanded by Kombrig D. G. Pavlov, along with 56 new T-26 tanks. Pavlov's force received a major infusion of new equipment and manpower in March 1937 with the arrival of 100 more T-26 tanks. In total, the Soviet Union sold Spain 281 T-26 tanks, with the final batch arriving in March 1938. The later batches included new T-26 Model 1937s with the PU-40 antiaircraft machine gun mount and other improvements.

After the initial successes in the fall of 1936, the impact of the T-26 tanks declined. Cooperation between the Republican tanks and the infantry was almost uniformly abysmal. There was no training in cooperative tactics before missions for the tanks and infantry. The Republicans could not afford to pull the tank companies out of the line for such training, and the Soviet advisor units were reluctant to expend precious engine hours drilling with the Spanish infantry. Pavlov's 1.a Brigada Blindada (1st Armored Brigade) was broken up into small, company-sized detachments to reinforce the Republican lines. As the French had found in World War I, the presence of tanks provided a strong psychological reinforcement to demoralized infantry, and there was great demand for tank support across the Madrid front. The main adversary of the T-26 was not the Nationalist tanks, but the Rheinmetall 37mm antitank gun imported from Germany. The fighting around Madrid in January and February of 1937 cost the brigade 34 tanks, nearly 70 percent of the force committed, mainly to Nationalist antitank guns. Soviet artillery specialist G. I. Kulik remarked that the antitank gun would sweep the battlefield of tanks in the same way that machine guns swept it of infantry. The armor of the T-26 was too thin to resist the new guns.

Evaluations of the T-26 tank in Spain concluded that if well maintained, the tank performed well, but a variety of shortcomings were noted aside from its inadequate armor. Vision from the tank was poor and it was difficult to identify the enemy during battle. Many tanks were limited to the telescopic sight and lacked the optional periscopic sights. Likewise, the driver's episcope offered poor vision when the tank was buttoned-up for combat. Turret ventilation was poor when the guns were firing, and the crew became asphyxiated during prolonged combat. Without a doubt the single most

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troublesome technical feature on the T-26 was the 71-TK-1 radio. The radio set required very precise tuning, which was soon lost during cross-country travel. The rail antenna was very vulnerable to combat and movement damage, and most units found that it became inoperative after a few days of fighting. Due to the poor radio performance, the T-26 unit commanders used flags for signaling, but found that these signals were frequently misinterpreted and that enemy gunners soon concentrated on a tank that was using flags.

The most common problem during movement was track breakage. The engine spark plugs needed frequent attention, but it was difficult to get ready access to the plugs. The radiator was easily damaged by artillery fragments and even by infantry attack using bayonets. The poor durability of the T-26 was a perennial problem, exacerbated by the lack of trained mechanics and repair facilities. For example, during the Teruel campaign in December 1937 to February 1938, the 104 T-26s that were involved were repaired 586 times over 65 days of fighting, roughly once every 11 days. Most of these were ordinary field repairs involving tracks and minor engine repairs. However, there were 63 medium and capital repairs requiring 58 engine replacements, six transmissions, 15 main clutches, and 22 side clutches. In other words, every other tank had its engine replaced after only about two months of combat use. To help minimize wear on the tanks, the Spanish turned to the use of transport trucks to move the tanks between battles.

Curiously enough, the Nationalists increasingly turned to the T-26 as their preferred tank. About ten had been captured by the fall of 1937, and more and more were gradually integrated into the Nationalist tank units, eventually becoming the backbone of Franco's tank units.

T-26 Export

The Soviet Union was not as widely engaged in weapons export in the 1930s as it was after World War II. Nevertheless, there was some noteworthy export of the T-26 light tank beyond the Spanish sales. China had purchased 16 Vickers 6-Ton Tanks in 1935, which served in the 1st and 2nd Tank Battalions in Shanghai. In the summer of 1937, full-scale war finally broke

A Chinese T-26 radio tank with combat headlights takes part in the retreat on November 23, 1944, during the Japanese offensive into Hunan province.

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A T-26 radio tank sits abandoned on the outskirts of the Tapa airfield in Kunming, China, on November 11, 1944. This provides a good view of the welded hull construction.

out between China and Japan. The Vickers 6-Ton Tanks were mostly lost in the fighting with the Japanese in Shanghai in late 1937.

The Soviet Union had been involved in border skirmishes with the Japanese Kwangtung Army in Manchuria since 1934, and serious fighting broke out in Mongolia at Lake Khasan in 1938. As a result, Moscow decided to support China. The Soviet Union assisted China in forming the 200th Mechanized Division, and in 1938 sold them 87 T-26 light tanks. This division was stationed in southeastern China and saw considerable fighting in 1941–45.

The only other major export client for the T-26 was Turkey. A small, trial batch of T-26 Model 1931 twin-turret tanks was purchased in 1932, along with a few T-27 tankettes. In 1934, the tank battalion (Tank Taburu) was formed in Luleburgaz and equipped with 64 Soviet T-26 Model single-turret tanks and 34 Soviet BA-6 armored cars. These remained in service into the 1940s, when they were largely replaced by more modern types.

Modernizing the T-26 Tank

Preliminary ideas for a new generation of infantry-support tank to replace the T-26 were outlined by Semyon Ginzburg in the fall of 1936. However, the Soviet tank industry was thrown into turmoil by the Great Purges. The initial victims of Stalin's paranoid fury were the top Red Army commanders, starting with Mikhail Tukhachevskiy, who was executed after a show trial; Khalepskiy was also killed. The tank specialists were suspect due to their central role in army mechanization by the disgraced Tukhachevskiy and Khalepskiy, and the madness soon spread to the tank-development bureaus and factories as well.

The T-26 Model 1938 still employed the distinctive rail antenna for its 71-TK-1 radio set, as seen in this view from the November 7, 1939, parade in Kiev. This T-26 was fitted with the P-40-UM antiaircraft machine-gun mount.

Reports from Spain condemned the poor durability of the engine on the T-26 and blamed poor manufacturing quality. This led to accusations of treachery at Plant No 174, and Ginzburg and others were arrested as "enemies of the people." Unlike other tank designers, Ginzburg was lucky not to have been shot. As a result of the political repression, T-26 production in 1937 fell to only 550 tanks, and development work ground to a halt. Ginzburg was later reinstated, but the political paranoia had a pernicious impact at the plant.

Work on an eventual successor to the T-26 resumed, but in the meantime a variety of improvements were introduced

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based on the lessons from Spain. To improve protection, a new turret with sloped armor entered production in 1938. The engine was upgraded with imported Scintilla and Bosch starters and other improvements that increased the horsepower from 93 to 96. A crew escape hatch was added in the belly of the tank. The suspension was improved by thickening the springs. This version is sometimes called the T-26 Model 1938, though this was never an official designation. The T-26's engine radiator cover failed to protect it from artillery fragments, Molotov cocktails, and even bayonet jabs. A new cover, nicknamed the rumble seat (*zadnitsa*) by tank crews, was added in the summer of 1939.

British officers inspect a T-26-1 Model 1939 of the 57th Tank Division, 28th Mechanized Corps, in Iran after the joint Anglo-Soviet invasion in August 1939. Aside from the stamped mantlet, this also shows the 20mm enhanced armor hull side below the turret.

Another major upgrade entered production in late 1938. Since it was impossible to comprehensively up-armor the tank without a complete redesign, a variety of expedient measures were taken. The hull sides were reinforced to 20mm by adding an appliqué extension on the upper-hull superstructure. This feature first appeared on the final production batches of tanks with the T-26 Model 1938 turret.

The turret was modified again with the introduction of a new stamped mantlet in place of the integral welded mantlet of the T-26 Model 1938. A gun-sight stabilization system was developed, the TOS, and issued to some tanks. In January 1939 the rear turret ball machine-gun mount was deleted.

The factories in the Leningrad area added *ekranovka* (appliqué armor) to many light tanks as a result of the 1940 combat experiences in Finland. This T-26-1 Model 1939 shows the factory-applied appliqué armor. Sitting next to it is a T-50 infantry tank, also fitted with appliqué. Both of these tanks were captured by the Finnish Army and are seen here in the repair depot at Varkaus on February 15, 1942. (SA-Kuva)

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Internal ammunition stowage was increased to 186 rounds (165 on radio tanks). The improved commander's PTK vision device, first used on radio tanks, was also issued with line tanks. The 71-TK-1 radio was replaced by the 71-TK-3, and in January 1939 the rail antenna was replaced by a more modern whip antenna. The suspension was upgraded by increasing the spring bundle from three to five leaves. The version with this upgrade package was variously called the T-26-1 or T-26 Model 1939.

T-26 Comparative Technical Characteristics

Model	1932	1933	1937	1938	1939
Turret	twin	single	single	single	single
Type	line	radio	radio	radio	radio
Length (m)	4.62	4.62	4.62	4.62	4.62
Width (m)	2.44	2.44	2.44	2.44	2.44
Height (m)	2.19	2.33	2.33	2.33	2.33
Weight (metric tons)	8.2	9.4	9.75	9.8	10.25
Main armament	2 x DT	45mm	45mm	45mm	45mm
Main ammo	6,615	84	107	111	165
Max speed (km/h)	31	31	31	31	31
Engine (hp)	90	90	93	93	95
Road range (km)	140	140	240	240	240
Max armor (mm)	15	15	15	15	20

T-26 Replacements

To expand the Soviet tank production base, the Stalingrad tractor plant (STZ: Stalingradskiy traktorniy zavod) was brought in to produce the T-26. As an outcome of this work, the small design team under V. D. Verner at STZ proposed a major chassis upgrade using a new hull with a wheel-and-track suspension based on a modified version of the Christie system used on the BT cavalry tanks. A working pilot of the STZ-25 was tested starting in February 1939, shortly followed by the STZ-35, which was intended as a tracks-only alternative. There was little army support for the scheme, and it was canceled by the defense ministry in October 1939.

Ginzburg's design bureau at Plant No 174 had worked on a series of design studies to replace the T-26 ever since the TMM-1 and TMM-2 proposals of 1931. The Red Army tested a Czechoslovak LT-35 tank in 1938 and Ginzburg copied the Schneider-Brillé suspension for the upgraded T-26M. Plant No 185 proposed a deeper modernization called the T-26-5, which would have used the new suspension or another type with coil springs, increased the hull armor to 20mm, and increased the engine power to 130hp to accommodate the weight increase. Plant No 185 was also working on the Type 744 diesel engine, which offered 180hp. In March 1940 the work was consolidated under Plant No 174. The final effort to redeem the T-26 was the T-126 program, which boosted the armor to 40–45mm, added a new diesel engine, and substituted torsion bar suspension and new road wheels. The poor combat performance of the T-26 in Poland in 1939 and in Finland in 1939–40 led to considerable skepticism in the Red Army over its future viability. Plant No 174 was already working on a fundamentally new infantry tank that would eventually emerge as the T-50. As a result, production of the T-26 was terminated on January 1, 1941, and the assorted upgrades gradually slipped into limbo.

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T-26 Tank Production 1931–41

	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	Total
Plant No 174												
Twin turret tank	100	1,361	576	1								2,038
Line tank (45mm)			693	489	553	447			945	1,018	47	4,192
Radio tank (45mm)			20	457	650	826	550	716	350	318		3,887
STZ production			5	23	115			30		10		183
Tank subtotal	***100***	***1,361***	***1,294***	***970***	***1,318***	***1,273***	***550***	***746***	***1,295***	***1,346***	***47***	***10,300***
Plant No 174												
KhT-26	9	106	430	7								552
KhT-130						10		290	101			401
KhT-133/-134									4	267		271
ST-26	3		44	20	2	1		1				71
TT-26/TY-26		33				74		55				162
SU-5					3	30						33
SU-6											14	14
T-26T		183				14						197
Total	***112***	***1,683***	***1,768***	***997***	***1,323***	***1,402***	***550***	***1,092***	***1,400***	***1,613***	***61***	***12,001***

Flamethrower Tanks

The most significant versions of the T-26 family were the flamethrower tanks, labeled in Red Army service as "Chemical tanks" (KhT: *Khimicheskiy tank*) or later as "Flamethrower Tanks" (OT: *Ognemetniy tank*). Development of the first flamethrower tank based on the T-26 twin-turret began in 1932 at Voroshilov Plant No 174. It was originally called the BKhM-3 (*Boevaya khimicheskaya mashin*: Chemical fighting vehicle). The left-side turret was removed to provide hull space for a large 400-liter fuel tank, along with three 13.5-liter compressed-air tanks. The KS-2 flamethrower was mounted in the right-side turret along with a DT machine gun, and it had an effective range of about 40 meters. Trials were conducted in the summer of 1932 by the Red Army Chemical Forces, and after acceptance for Red Army service, 552 were manufactured in 1932–35.

The limited range of the flamethrower led to further development work on a version derived from the single-turret T-26 Model 1933, in conjunction with the Kompressor plant in Moscow. The KhT-130 tank was fitted with the new KS-25 flamethrower, which increased the maximum range to 53 meters with a one-second burst projecting 9 liters of kerosene fuel. The turret was moved from the left side of the hull to the right side in order to accommodate the fuel

The KhT-26 flamethrower tank was built in 1935, but most underwent modernization in 1938–40. This example was captured by the Finnish Army and was later used for driver training. (SA-Kuva)

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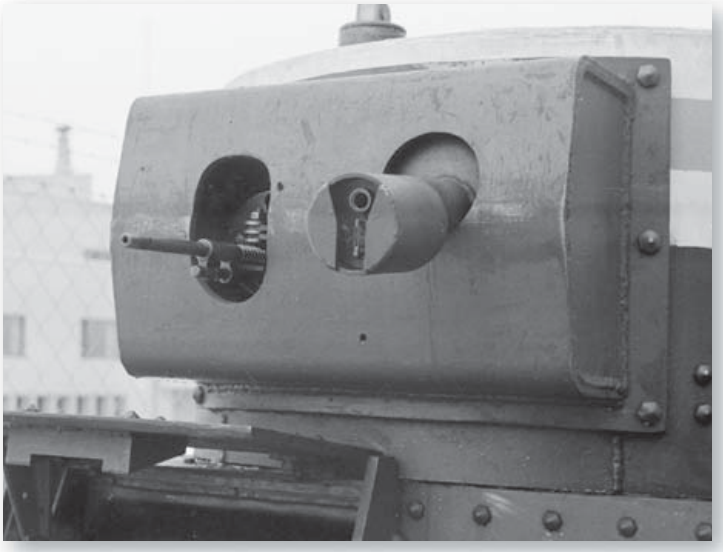

A close-up of the mantlet of a KhT-130 flamethrower tank showing the coaxial DT machine gun and the flame projector. This particular tank was captured from the Red Army in the 1940 fighting and put back into service by Finland. It is seen here in 1940 with the early-style Finnish national identity markings, consisting of white–blue–white bands. (SA-Kuva)

containers. Two fuel containers were located in the left side of the hull with 393 liters of kerosene, and there were four 13-liter compressed-air cylinders on the right side of the hull under the turret. Production took place at Voroshilov Plant No 174, and 401 were manufactured from 1936 to 1939.

In 1939, work was undertaken on several new designs. There was some concern that flamethrower tanks could not defend themselves, and so there was interest in a flamethrower tank that retained the 45mm gun while still carrying a flamethrower. The KhT-131 was based on the T-26 Model 1938, but with a flamethrower in the turret along with the usual 45mm gun. This arrangement proved unworkable due to the small internal dimensions of the turret and tank hull. This gave way to the KhT-132, also based on the T-26 Model 1938, but without the 45mm gun. Since the new T-26-1 Model 1939 was entering production at this time, work transferred to this design as the KhT-133. This was essentially similar to the earlier KhT-130 except for the use of the new chassis. Production proved troublesome due to difficulties integrating the flamethrower equipment into the new turret.

The idea of retaining the main gun remained attractive, so in late 1939 Plant No 174 developed the KhT-134, which kept the 45mm gun in the turret, but moved the flamethrower to the center of the hull superstructure. Two pilot tanks were built on modified T-26-1 Model 1939s that had been fitted with appliqué armor. They were completed in January 1940 and were sent to the 210th Chemical Tank Battalion of the Northwestern Front serving in Finland.

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1: KHT-130, 210TH INDEPENDENT CHEMICAL TANK BATTALION, SOVIET 7TH ARMY, KARELIA, FINLAND, FEBRUARY 1940

Soviet tanks originally appeared in overall 4BO camouflage green in the opening phases of the 1939–40 Winter War. However, whitewash appeared during the reforms in January 1940. In this case, a flamethrower tank has been given a vivid camouflage pattern of whitewash stripes over the usual green. More often, the tank was painted entirely in whitewash.

2: KHT-130, MECHANIZED CORPS, WESTERN SPECIAL MILITARY DISTRICT, JUNE 1941

In 1939, the Armored Technology Scientific Research Institute (NIIBT) at Kubinka established a set of recommendations for camouflage painting of armored vehicles. Units in Group 1 (northern USSR) were to use two or more colors including 4BO green, 6K dark brown, sand (*svetlo-peschaniy*), and 7K earth yellow (*zhelto-zemlistiy*); Group 2 (southern European USSR) were to use green with a "sea-wave" pattern of 7K earth yellow; Group 3 (central Asia) were to use brown and sand; Group 4 (Far East) were to use green and dark brown. These rules were not rigidly applied and this flamethrower tank shows a common scheme of 4BO green and 6K dark brown. Contrary to popular belief, the national red star insignia was not regularly painted on tanks, though it was not uncommon for it to be applied for parades or other events. In this case it is a more elaborate version than usual, and this insignia was also repeated in the center of the lower bow plate.

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A camouflaged KhT-130 flamethrower tank of the 210th Independent Chemical Tank Battalion of the 7th Army during the fighting in Karelia in Finland in February 1940.

Chemical tanks were initially deployed in company strength in the new mechanized and tank brigades. From 1935, they were generally deployed in independent chemical tank battalions, consolidated in later years into chemical tank brigades. During the late 1930s, there were three of these brigades, one each in the Far East, Volga, and Moscow military districts. The first combat use of the chemical tanks took place in the Far East with the commitment of the 9th Mechanized Brigade against Japanese forces near Lake Khasan in August 1938. This brigade had nine KhT-26 tanks, and lost one during the fighting. When fighting renewed in May 1939 near Khalkin Gol, the Red Army had two companies numbering about ten KhT-26s with the 11th Tank Brigade. In July 1939, a company of the 2nd Chemical Tank Brigade entered the fray with 18 KhT-130 flamethrower tanks, and additional units arrived in time for the August 1939 fighting. An after-action report concluded that

> The use of chemical tanks during the conflict in the Khalkin Gol region fully paid off, and they won a strong reputation among the infantry. The Japanese infantry proved afraid of chemical tanks, evident from the testimony of captured soldiers, NCOs, and officers as well as by the behavior of their troops when under attack by chemical tanks. The KhT-130 and KhT-26 proved to be an indispensable weapon for burning and smoking out Japanese troops in slit trench, bunkers, etc. On the negative side, the stream range of 35–40 meters does not keep the tank outside of enemy grenade range. The KhT-26 is obsolete and based on an imperfect chassis that renders it ineffective in combat.

The chemical tanks were committed in far larger numbers during the Winter War with Finland in 1939–40, including four separate chemical tank battalions (201st, 204th, 210th, and 218th) as well as 13 flamethrower tank companies. At first, they did not prove to be very successful due to the poor state of preparation of the Red Army in general. By the early months of 1940, however, more sophisticated assault tactics were developed to overcome Finnish bunkers. Attack groups usually consisted of two flamethrower tanks, three gun tanks, a combat engineer platoon, a company of infantry, and one or more field guns. Attacks were frequently staged at night to reduce the vulnerability of the tanks. The gun tanks suppressed

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A KhT-130 knocked out in the fighting in Finland near Havtavaara on August 21, 1944. This rear view shows the fuel filling assembly on the rear to the right of the muffler. (SA-Kuva)

fire from the Finnish bunkers, and also helped break open the embrasures with gunfire to make them more vulnerable to flame attack. Although the flamethrower tanks proved essential in these tactics, the cost was very high due to the thin armor of the basic T-26 and the short range of the flamethrowers. An after-action report noted that

> in comparison to the T-26 line tanks, the losses of the chemical tanks are much higher. According to reports, the line tanks suffer 14.9 percent casualties when knocked out while the chemical tank battalions suffer 34.3 percent losses. The explanation for this is the inevitable result of the fires that are ignited when the tank is penetrated. The fire often engulfs the chemical tanks for 15–20 hours, and the temperatures are so high that the crankcase and transmission are melted, sometimes even the glass vision devices.

The vulnerability of the flamethrower tanks led to a crash up-armoring program by the Soviet 8th Army workshops, and Voroshilov Plant No 174 rushed 15 of the new KhT-133 to the front with factory-installed appliqué that increased the side and frontal armor to 30–40mm.

As a result of the combat experiences in Finland, the consensus emerged that the compressed-air method for projecting the flamethrower fuel was fundamentally flawed. As a result, work on compressed-air flamethrowers was abandoned in favor of work on a new generation of flamethrowers using gas generators powered by gunpowder. As a result, the KhT-134 was the last type of flamethrower tank based on the T-26 chassis, and there was no series production beyond the two prototypes. When the mechanized corps were formed in the summer of 1940, each was assigned two chemical tank battalions for a total of 56 flamethrower tanks. In practice, the actual number in service varied considerably. At the time of Operation *Barbarossa* in June 1941, there were still 994 T-26 flamethrower tanks in Red Army service.

Besides the T-26 flamethrower tanks, the Red Army Chemical Forces sponsored several experimental weapons for generating battlefield smoke screens and for dispersing chemical agents. The T-26/TDP-3 was a 1933

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A KhT-133 flamethrower tank of the 133rd Independent Chemical Tank Battalion lost during the fighting with the Finnish Army near Prääza on September 9, 1941. As of mid-August 1941, this battalion had 11 KhT-133s in service. This version used the turret of the T-26-1 Model 1939 tank with its distinctive stamped gun mantlet. (SA-Kuva)

project to fit a pair of TDP-3 dispensers on the rear of the T-26 Model 1931. The MKhT-1 chemical mortar tank was a 1935 project based on a T-26 Model 1931 with the left turret removed and a KhM-31 107mm smoke mortar fitted in the hull. The OU-T-26 was a 1936 attempt to develop a tank-mounted flame weapon that could be used to defend a tank against close-quarter infantry attack. None of these weapons was pursued beyond the experimental stage.

Robot Tanks

The Red Army had experimented with remote-control tanks since 1929 under the Central Laboratory for Radio Guidance (TsLPS). These were called Teletanks (TT) in Red Army service. In 1933, a small batch of T-26 Model 1931 twin-turret tanks was fitted with radio-control systems. Teletank teams consisted of two tanks, a TT-26 robot tank, and a TU-26 command tank, which contained the radio control system. The first tactical application for the teletanks was as flamethrower tanks, since it was presumed that this would enable the tank to approach an enemy bunker closer without risking the crew. The other application for this weapon was to deliver chemical warfare agents closer than would be possible using a manned vehicle. Further work on the teletanks was undertaken by the NII-20 research institute and Vladimir Bekauri's Ostekhbyuro (Osoboe-tekhnicheskoye biuro: Special Technology Bureau).

Towards the end of 1936, Voroshilov Plant No 174 manufactured 37 Project Titan teletank teams, each consisting of a TT-26 teletank and a TU-26 command tank. The teletank resembled the normal T-26 Model 1933 single-turret tank, but a KS-2 flamethrower was used in place of the 45mm gun; the command tanks used the TOZ-IV radio command system. Unlike the manned flamethrower tanks, the TT-26 left the turret on the left side of the hull. These were distributed to four heavy tank battalions and several schools for familiarization and further trials. In 1937, a further batch was produced using the improved TOZ-VI control system, totaling 27 TU-26s and 28 TT-26s. The control tank could operate the robot tank at a maximum range of about 2.5km (1.5 miles).

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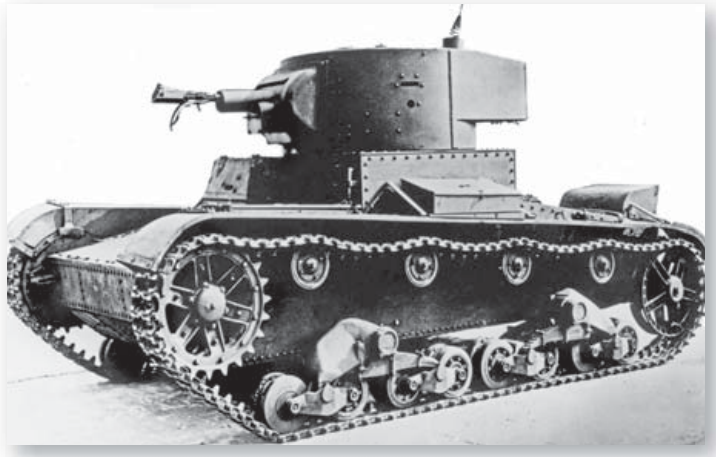
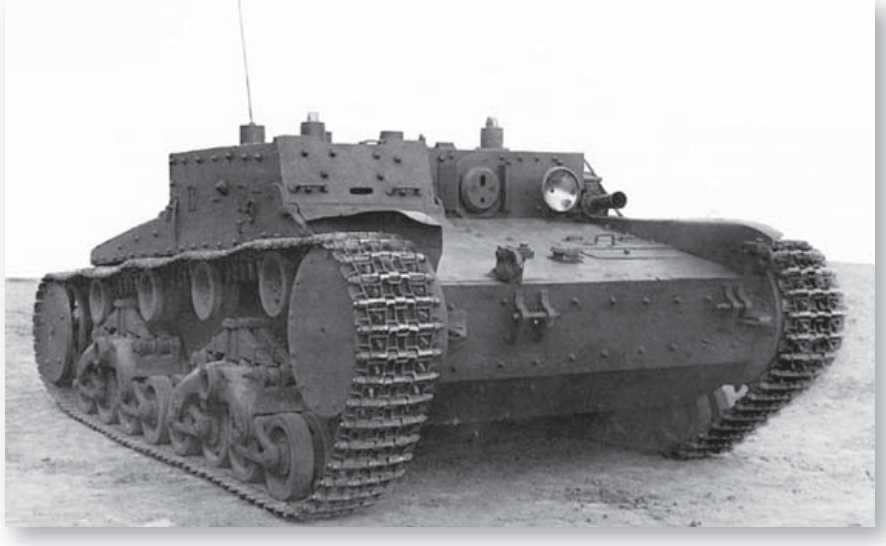
Further development of teletanks was disrupted by the purges. In September 1937 Bekauri was arrested, and he was shot in February 1938. The small operational experiments with the teletanks in 1936–37 and the arrival of the new 1937 batch led to the consolidation of the teletanks into the 152nd and 217th Independent Teletank Battalions. The 152nd Ind Teletank Battalion was deployed during the Polish Campaign of 1939, but saw no use in the robot-tank role. During the Winter War with Finland in 1939–40, the 217th Ind Teletank Battalion was attached to the 20th Heavy Tank Brigade (T-28) with 32 teletank teams, along with an organic 7th Company with seven more teletanks. It was first used on December 17, 1939, in support of an attack by the 123rd Rifle Division. The first attack was a failure when the teletanks became bogged by heavy snow that concealed antitank obstacles. Because of their work in attacking bunkers of the Mannerheim Line, the tanks proved very vulnerable to associated minefields and antitank obstacles. The radio control system proved to be troublesome, and on many occasions the teletanks were operated in a manned mode rather than remotely controlled. By February 1940, 42 teletanks had been knocked out, of which six were total losses, 21 required major overhaul, and 15 were repaired by the battalion.



The TT-26 Titan teletank was fitted with the KS-2 flamethrower and TOZ-IV radio-command system with its distinctive small whip antenna on the roof. Unlike the conventional KhT-130 flamethrower tank, the robot tank had the turret on the left side like the original gun tanks, and used the same mantlet as the 45mm gun tanks. This particular tank was captured from the 152nd Independent Teletank Battalion by the Wehrmacht during the fighting around Rovno in the summer of 1941.

In the meantime, another type of teletank was being developed to attack Finnish bunkers with explosive charges. The T-26-Sh teletank was built using the reinforced T-26-5 suspension with appliqué armor, and lacked a turret. It was fitted with yet another revision of the control system, the TOZ-VIII with the older-style rail antenna around the superstructure on the command tank. These teletanks carried a special armored bin on the front fabricated from 30mm steel and containing 300–700kg of high explosive. The tank was



The T-26-Sh Podryvnik teletank was based on the T-26-5 chassis with the reinforced suspension based on the Škoda LT-35. The vehicle had appliqué armor added to increase its survivability against antitank guns. An explosive bin was carried on the glacis plate and remotely deposited against bunkers or other objectives using the remotely operated release fitting seen in this view. Although deployed in Finland in February 1940, it did not see combat.

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A parade with the SU-5-2 self-propelled 122mm howitzer of the 2nd Mechanized Brigade, Independent Far East Army in Khabarovsk on November 7, 1937. Many of these vehicles served in the Far East military districts.

A T-26T artillery tractor with the armored superstructure of the 13th Artillery Regiment, 1st Moscow Proletariat Division on display in Red Square during the May 1937 parade in its usual role towing the 76.2mm F-22 divisional gun.

driven next to the target and the bin released by remote control; the fuse was set to detonate the charge up to 15 minutes later to allow the tank to escape. A small experimental team codenamed Podryvnik (Blaster) was sent to Finland at the end of February 1940 but was never committed to action. Experiments with the T-26-Sh Podryvnik teletanks against captured antitank obstacles and bunkers were promising enough that further development continued after the Winter War.

The 152nd Ind Teletank Battalion, attached to the 22nd Mechanized Corps, saw combat during the fighting around Rovno in June–July 1941, but with its teletanks and command tanks fully manned and used in a conventional fashion. The unit was largely wiped out in the summer battles. During the 1940 reorganization of the armored force, the 217th Ind Teletank Battalion was reorganized as the 51st Ind Tank Battalion of the 4th Mechanized Corps and stationed outside Moscow. This battalion later saw action in the battle for Ryazan in November 1941, but using its command tanks as ordinary gun tanks.

Artillery Tanks

Alongside the T-26 tank, the Red Army intended to deploy the SU-1, a turretless version of the tank armed with a 76mm regimental gun. Although the prototype proved acceptable, work on a turreted version of this weapon such as the T-26-4 led to the cancelation of the SU-1. The program was revived in 1933 as the AT-1, but rearmed with the new 76mm PS-3 gun, which could fire the ammunition both of the 76mm Model 1927 regimental and the 76mm Model 02 divisional gun. Although testing in 1935 was successful, the abandonment of the PS-3 gun project led to the demise of the AT-1.

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A T-26T artillery tractor abandoned near Rautalahti during the fighting in Finland in August 1941 when the 168th Rifle Division was encircled.

In 1933, the RVS approved the development of a "Small Triplex" artillery system on the T-26 chassis with the SU-5-1 armed with the 76mm divisional gun Model 1902/30, the SU-5-2 with the 122mm howitzer Model 1910/30, and the SU-5-3 with the 152mm mortar Model 1931. Prototypes of all three were built and tested, but the Red Army decided to abandon all but the SU-5-2. A total of 33 of these were manufactured, most serving in the Far East. The only other mechanized artillery version to be built in any quantity was the SU-6, which mounted the 76mm 3-k Model 1931 76mm antiaircraft gun. This was on a special platform with folding panels to accommodate the gun crew. Of the 14 vehicles built, ten were armed later with the experimental Shpitalniy 37mm automatic cannon. The SU-6 was not accepted for serial production.

The artillery force was also interested in a prime mover based on the T-26, and these entered production in 1932 as the T-26T (T= *tygach* or tractor). This used an open superstructure and a simple canvas tarp. In 1936 there was a modest production run of ten armored T-26Ts as well, which were used to tow the new F-22 76mm divisional gun. A variety of command and transport vehicles were also built on the T-26, including an artillery command post with radio and optical rangefinder. None of these entered serial production.

The ST-26 engineer tank transported and deployed a bridge for breaching antitank traps and other obstructions. It is seen here during its trials in Leningrad in 1932.

After the start of the war with Germany in 1941, the Kirov Plant in Leningrad used some T-26 chassis to make improvised self-propelled guns. At least two were armed with 37mm guns, and a further dozen with 76mm regimental guns behind a riveted armor shield. Sometimes called the SU-26, these were used mainly by the 124th and 220th Tank Brigades in the Leningrad area.

Engineer Combat Vehicles

The Red Army's engineer branch undertook extensive experimentation with the T-26 chassis for armored engineer vehicles. A wide variety of mine rakes, mine rollers, and mine plows were developed, but none entered service use. There were also a variety of schemes for crossing rivers, including deep-fording kits for driving

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The T-26 saw combat during the Red Army battles with the Japanese Kwangtung army around Lake Khasan in 1938 and again around Khalkin Gol in 1939. Here is a platoon of T-26 Model 1933s of the 334th Ind Tank Battalion, 36th Moto-Rifle Division on the Far Eastern Front during the 1939 campaign.

underwater, and inflatable pontoons for swimming across rivers. None were accepted for production. The only engineer tank to reach serial production was the ST-26, manufactured in small numbers in 1934, which could deliver and deploy a 6-meter-long bridge. These were typically deployed in motorized pontoon-bridge battalions with a section of four bridging tanks.

COMBAT RECORD

War in the Far East

The first combat use of the T-26 by the Red Army took place in 1938 during the fighting with the Japanese around Lake Khasan in July. There were 257 T-26 tanks in this sector with the 2nd Mechanized Brigade and the 32nd and 30th Ind Tank Battalions, including ten KhT-26 flamethrower tanks, three ST-26 bridgelayers, and 13 SU-5-2 122mm self-propelled howitzers. The 2nd Mechanized Brigade had had its upper ranks decimated by political purges in the days before the battle, and performed badly in combat. During

D

1: SU-26, 220TH INDEPENDENT TANK BRIGADE, LENINGRAD FRONT, WINTER 1943

The Kirov plant in Leningrad began fashioning improvised self-propelled guns using spare T-26 chassis in the fall of 1941. These used the 76mm Model 1927 regimental gun behind an armored shield. The 124th Tank Brigade was the first unit to receive these, and they were variously called SU-26, SU-T-26, or SU-76. These subsequently equipped the 220th Tank Brigade, and this plate shows one still in use in the winter of 1943, with a rough whitewash finish.

2, T-26 MODEL 1933 (EKRANOVKA), 220TH TANK BRIGADE, LENINGRAD FRONT, FEBRUARY 1944

One of the main tactical shortcomings of the T-26 was its thin frontal armor. In 1941, several factories began steps to improve the armor on T-26 tanks. This particular variant avoided the problems of trying to fit armor plate over the curved surfaces of the turret front by building out the entire front turret structure. It was painted in a simple whitewash over the usual 4BO green, and carries tactical markings in red.

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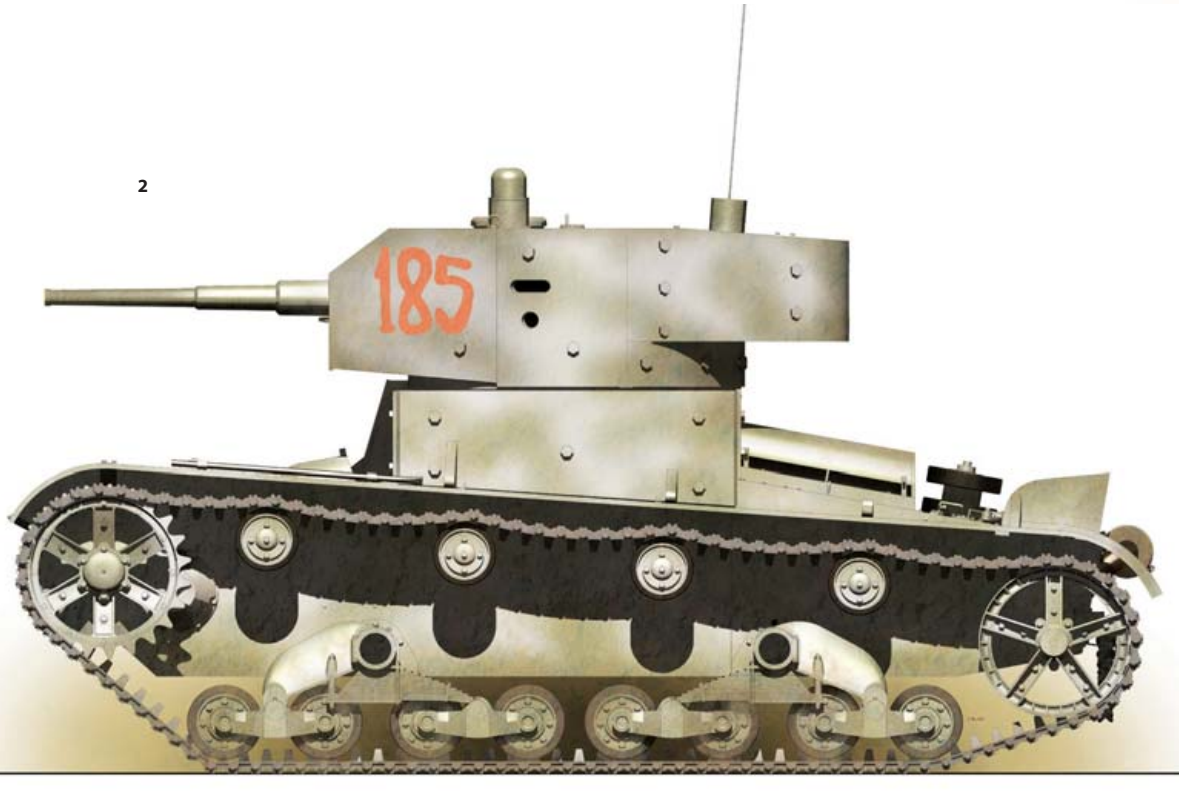

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the fighting around the Bogomolnaya and Zaozernaya hills, the brigade lost 85 T-26 tanks against Japanese antitank defenses.

The fighting resumed in the summer of 1939 along the Khalkin Gol river. By this time the Soviet tactical leadership had stabilized, and Moscow reinforced the region with additional tank units. The primary tanks in this theater were BT cavalry tanks. There were small numbers of T-26 tanks, mainly serving in the tank battalions of the rifle divisions. So for example, the 82nd Rifle Division had a battalion with 14 T-26 tanks. There were also flamethrower tanks attached to the tank brigades. The T-26 performed reasonably well in the 1939 fighting as the Japanese 37mm antitank gun was not especially effective against its armor. Of the T-26 tank types in the area, the flamethrower tanks saw the most extensive use, and ten KhT-26 and two KhT-130 tanks were lost in the fighting.

The Polish Campaign, 1939

The Soviet invasion of eastern Poland on September 17, 1939, was the largest tank operation by the Red Army to date and included 1,675 T-26 tanks, or about 15 percent of the total tank park. Most of these were in the tank brigades, which had a nominal strength of 256 to 267 tanks per brigade; others served in the tank battalions attached to the rifle divisions with 12–15 T-26 tanks per division. The invasion was largely uncontested except for skirmishes with border guards since the Polish Army was preoccupied with fighting the German Army in western and central Poland. The Soviet forces included the Byelorussian Front with 878 T-26 tanks (22nd, 25th, 29th, and 32nd Tank Brigades) and the Ukrainian Front with 797 T-26 tanks (26th, 36th, and 38th Tank Brigades). Combat losses were miniscule, only 15 T-26 tanks of all types. However, the invasion was an embarrassing display of the incompetence of the Red Army to conduct even an uncontested road march. Some 302 T-26 tanks broke down during the advance, about a fifth of the invading force. The problems were due to the poor leadership and demoralization of the senior commanders in the wake of the purges, the poor training of the average Red Army conscripts, and the lingering durability problems with the T-26 tank.

A column of T-26 Model 1933s of the 29th Tank Brigade are seen in Brześć-nad-Bugiem (Brest-Litovsk) along with German troops on September 24, 1939, during a parade for General Heinz Guderian and Kombrig S. M. Krivoshein to celebrate the end of the joint campaign against Poland.

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The Russo-Finnish Winter War, 1939–40

The uncontested Polish invasion hinted at the profound problems in the Red Army tank force, but the campaign against Finland starting on November 30, 1939, made these problems alarmingly clear. The Leningrad Front, home to the main T-26 production center, had 848 T-26 tanks on hand at the start of the war. The fighting eventually involved 20 divisional tank battalions, four light tank brigades, and the 10th Tank Corps. The employment of specialized flamethrower tanks and teletanks in the campaign has been detailed in the sections above.

The performance of the T-26 units in the first months of the campaign was poor. The narrow tracks of the T-26 were not ideal in deep snow, and snow-covered antitank obstructions and minefields took their toll. The Finnish forces were ensconced in the defensive positions of the Mannerheim Line. Even though the Finnish antitank arsenal was poor by European standards, it proved deadly against the thinly armored T-26. In the first two months of fighting from November 30, 1939, to February 1, 1940, the Red Army lost 1,110 tanks of all types from a starting strength of 1,570 tanks. Of these tank casualties, 540 were combat losses and 570 were mechanical breakdowns. The primary causes of the combat losses were gunfire (275 tanks) and mines/obstacles (106 tanks).

Prior to the renewal of the offensive, the Red Army on the Finnish front began a thorough reexamination of tactics and training, with the intention of reforming its forces prior to a major offensive. There were a few small technical innovations, such as the introduction of tank-drawn engineer sleds, which could be used to haul explosives forward for attacking Finnish bunkers, and Sokolov armored sleds to tow infantry assault squads forward under limited protective cover. The offensive resumed on February 1, 1940,

A twin-turret T-26 Model 1931 knocked out during the 1939–40 Winter War with Finland. It has the original riveted hull and has a 37mm PS-1 gun in the right turret.

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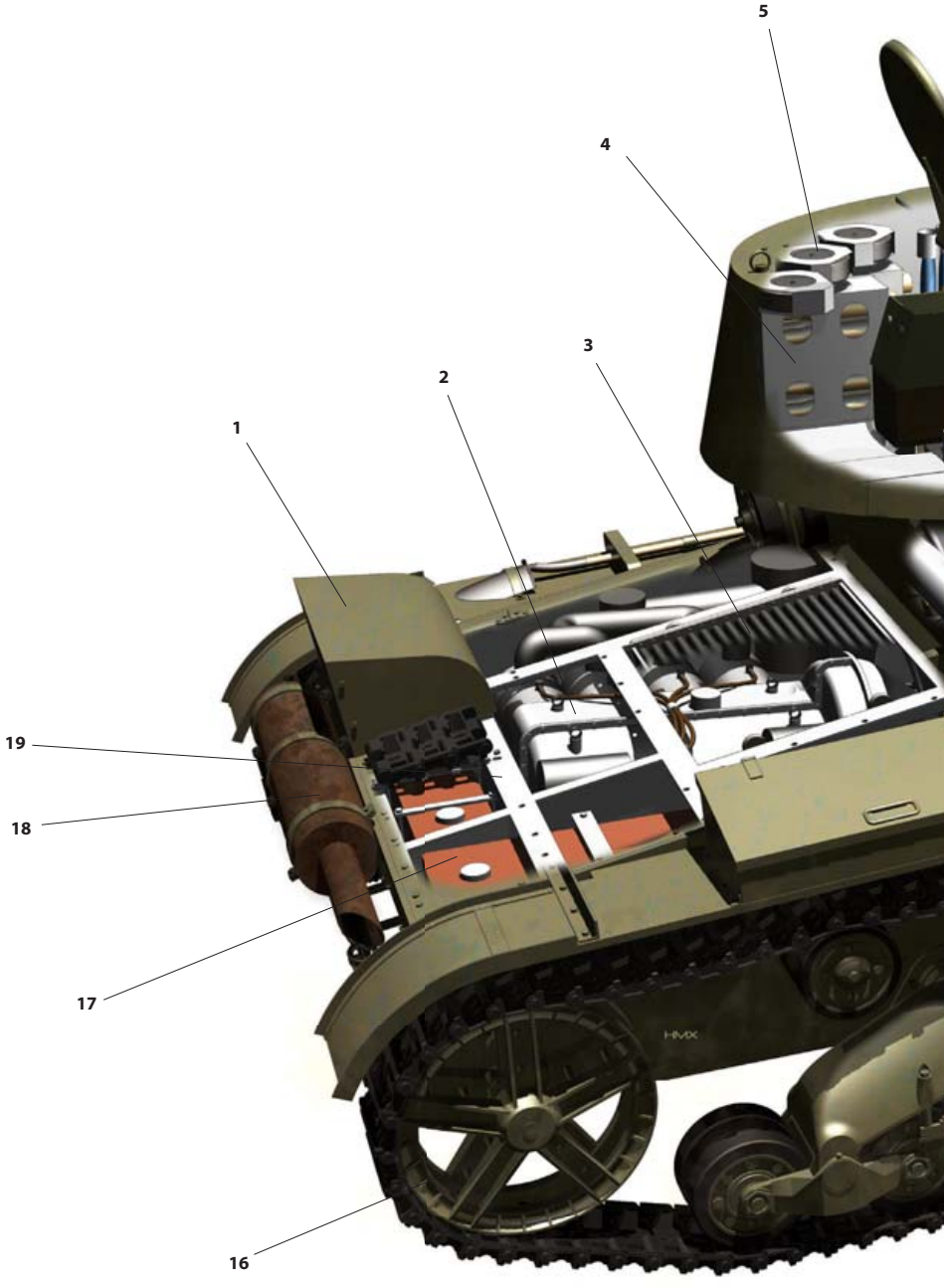
KEY

1. Engine air intake cowl
2. 95 hp engine
3. Engine radiator grill
4. 45mm tank gun ammunition rack
5. 7.62mm ammunition drum stowage
6. 7.62mm DT machine gun on P-40 anti-aircraft mount
7. Gunner's periscopic sight
8. 20-K 45mm Model 1934-38 tank gun
9. Coaxial 7.62mm machine gun
10. Transmission
11. Drive sprocket
12. Suspension bogie
13. Driver's seat
14. Gunner's seat
15. Loader's seat
16. Idler wheel
17. Fuel tank
18. Engine muffler
19. Spare track link



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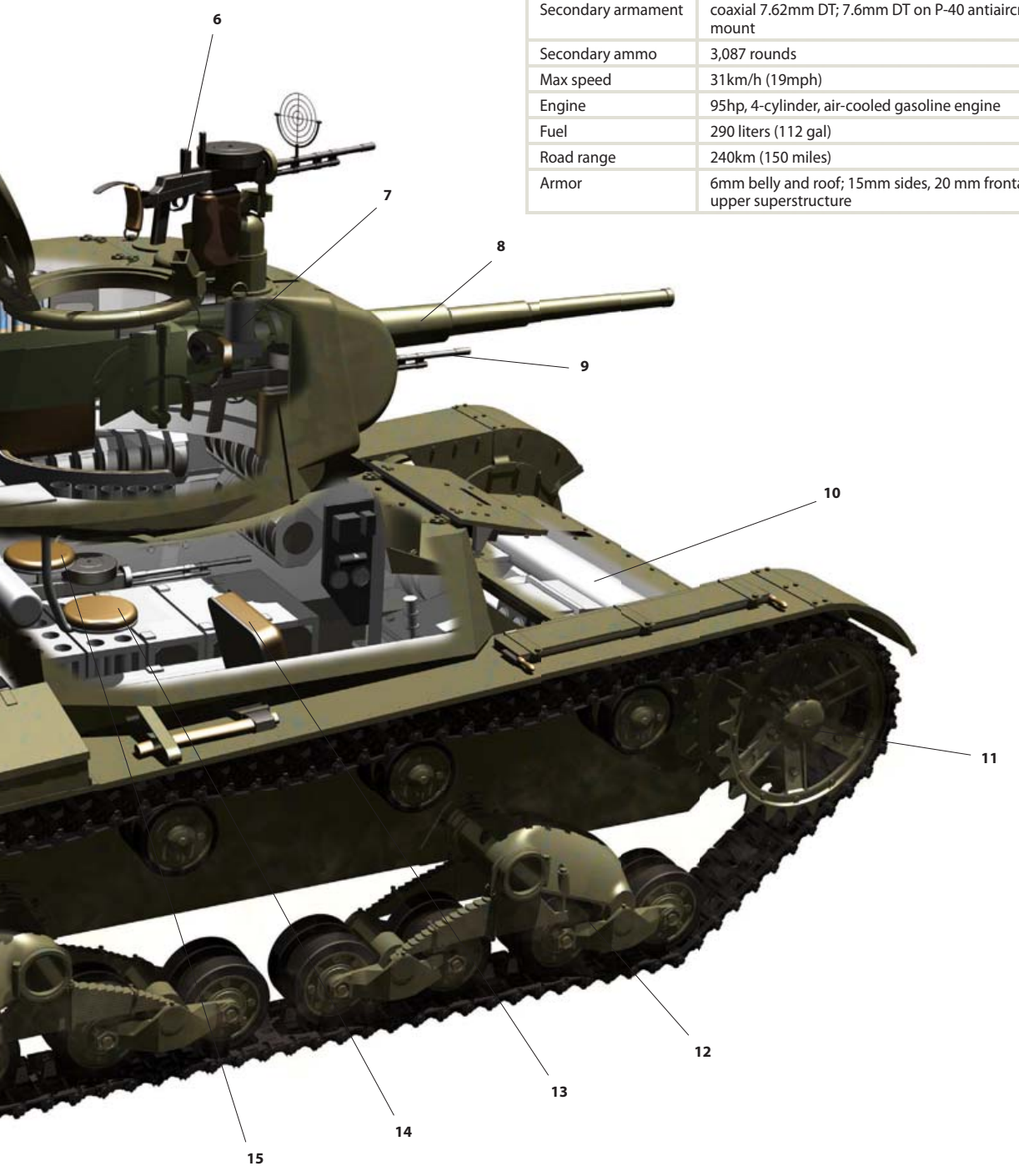
Technical Data	
Crew	3: commander/loader, gunner, driver
Length	4.62m (15.1ft)
Width	2.44m (8ft)
Height	2.33m (7.6ft)
Weight	10.25 metric tons (11.2 tons)
Main armament	20-K 45mm Model 1934–38
Main ammo	205 rounds (165 in radio tank)
Secondary armament	coaxial 7.62mm DT; 7.6mm DT on P-40 antiaircraft mount
Secondary ammo	3,087 rounds
Max speed	31km/h (19mph)
Engine	95hp, 4-cylinder, air-cooled gasoline engine
Fuel	290 liters (112 gal)
Road range	240km (150 miles)
Armor	6mm belly and roof; 15mm sides, 20 mm frontal and upper superstructure



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and relied as much on brute force as on refinements in tactics. At the start of the February offensive, there were 1,740 tanks of all types. Tank losses during the final six weeks of the assault were quite heavy, but the Finnish defenses finally crumbled. Total losses in the Finnish campaign were nearly 3,200 tanks of all types, of which 1,920 were combat losses and 1,275 were mechanical breakdowns and accidents; T-26 losses were about 1,170 tanks, including flamethrower tanks. The Soviet 7th Army bore the brunt of the fighting and lost 2,543 tanks, of which 930 were T-26s. Of these, 1,498 tanks including 463 T-26s were recovered and rebuilt.

Soviet Tank Losses in the Winter War, 1939–40

Period	Gunfire	Mines	Burned	Other combat	Mechanical, accident	Subtotal	Total loss
November 30, 1939, to February 1, 1940	275	106	154	15	570	***1,120***	118
February 1, 1940, to February 25, 1940	380	177	127	62	411	***1,157***	160
February 25, 1940, to March 13, 1940	300	100	155	68	294	***917***	90
Total	955	383	436	145	1,275	***3,194***	368

Operation *Barbarossa*

The Wehrmacht had watched the inept performance of the Red Army in Poland; its disastrous performance in Finland whetted Hitler's appetite for aggression against his erstwhile ally. In the wake of the spectacular and unexpected German victory over France in May and June 1940, the Red Army changed course yet again and reorganized its armored force. Its various tank brigades were consolidated into massive mechanized corps, emulating the Panzerkorps. This proved to be a serious mistake. In the wake of the purges, the Red Army lacked an experienced cadre of senior commanders to lead such a force, its junior officer ranks were inexperienced and usually a pay grade above their skill level, and the Red Army had systemic problems in command and control as well as logistics.

A large fraction of the Soviet tank losses during the summer 1941 campaign were due to road accidents and other misadventures resulting from the low level of training of many of the conscripts. This T-26 Model 1938 has ended up in a bog outside Tallin in Estonia. It was originally built as a radio tank, evident from the fittings on the turret side. Problems with the 71-TK-1 radio sets sometimes led to their removal, along with the awkward rail antenna around the turret.

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T-26 Strength by Military District, 1940–41

Military district	T-26 twin	T-26 line	T-26 radio	KhT-26	KhT-130	Other KhT	SU-5	ST-26	T-26T	Total June 1, 1940	Total June 22, 1941
In plants, depots	78	102	114	62	12	3		9	10	390	371
Leningrad	87	222	222	64	12	70		2	17	696	677
Baltic	25	334	148	10	1	9			3	530	527
Western	211	719	341	38	50	22	8	8	42	1,439	1,389
Kiev	230	746	722	16	113	119	9	2	33	1,990	1,955
Kharkov	81	46	46		4				4	181	177
Odessa	36	83	95		4	14			5	237	232
Moscow	30	131	114	50	31	100		26	18	500	361
Volga	50	15	8	14	2	3		1	9	102	92
Orlov	37	14	16						7	74	160
Caucasus/ Central Asia	79	377	400	23	10	105			4	998	994
Siberia	12	34	7		10				2	65	63
Far East/ Baikal	305	1,223	1,207	31	251		11	9	57	3,094	3,017
Total	*1,261*	*4,046*	*3,440*	*308*	*500*	*445*	*28*	*57*	*211*	*10,296*	*10,015*

On paper, the Red Army tank force was impressive. Even after the tank losses in Finland, the Red Army had more T-26 tanks on hand than all German tanks combined. The German panzer force was still heavily dependent on obsolete and weakly armed types such as the PzKpfw I and PzKpfw II. What the panzer force lacked in numbers and tank firepower it made up for with combat experience, better unit organization, and a much more sophisticated command-and-control network, which was well suited to waging mobile warfare. Furthermore, the Red Army's apparent superiority in tanks was an illusion. The vast numbers of T-26 infantry tanks and BT cavalry tanks hid the rotten core of mechanical decay, shortages of spare parts, and poor repair. The mechanical problems were exacerbated by a poor standard of training amongst the tankers and junior officers.

The 1941 reorganization plan envisioned 30 mechanized corps, which would have required 30,930 tanks; actual Soviet tank inventory in June 1941 was 23,106, of which about half were T-26 light tanks. The T-26 was not well suited to the mechanized-corps role, and the proposed tables of organization and equipment largely ignored the T-26 in favor of more modern types, relegating the T-26 to tank battalions in the rifle divisions. The new tank division was officially allotted only 22 T-26s and 54 T-26 flamethrower tanks of its 375 tanks. In the event, the grandiose scheme for the mechanized corps forced the Red Army to use more than half the T-26 inventory in this role.

In late August 1941, Soviet forces launched Operation *Compassion* against Iran to gain control of communication networks for the shipment of Lend–Lease supplies. This is a Soviet T-26 Model 1938 of the 57th Tank Division, 28th Mechanized Corps, in Tebriz on September 17, 1941.

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T-26 Strength in Red Army Mechanized Corps, June 22, 1941

Mechanized corps	Commander	Tank divisions	Mechanized divisions	Military district	AFV strength June 22, 1941	T-26 tanks*
1	M. L. Chernyavskiy	1, 3	163	Leningrad	1,039	278
2	Yu. V. Novoselskiy	11, 16	15	Odessa	527	62
3	A. V. Kurkin	2, 5	84	Baltic	672	41
4	A. A. Vlasov	8, 32	81	Kiev	979	178
5	I. P. Alekseyenko	13, 17	109	Transbaikal	1,187	303
6	M. G. Khatskilevich	4, 7	29	Western	1,021	126
7	V. I. Vinogradov	14, 18	1	Moscow	959	340
8	R. I. Ryabyshev	12, 34	7	Kiev	932	340
9	K. K. Rokossovskiy	20, 35	131	Kiev	316	144
10	I. G. Lazarev	21, 24	198	Leningrad	469	198
11	D. K. Mostovenko	29, 33	204	Western	414	166
12	N. M. Shestopalov	23, 28	202	Baltic	730	539
13	P. N. Akhyustan	25, 31	208	Western	282	264
14	S. I. Oborin	22, 30	205	Western	518	528
15	I. I. Karpezo	10, 37	212	Kiev	749	58
16	A. D. Sokolov	15, 39	240	Kiev	608	245
17	M. P. Petrov	27, 36	209	Western	63	1
18	P. V. Volokh	44, 47	218	Odessa	282	308
19	N. V. Feklenko	40, 43	213	Kiev	454	291
20	A. G. Nikitin	26, 38	210	Western	94	80
21	D. D. Lelyushenko	42, 46	185	Moscow	175	?
22	S. M. Kondrusev	19, 41	215	Kiev	712	512
23	M. A. Miasnikov	48, 51	220	Orel	413	101
24	V. I. Chistyakov	45, 49	216	Kiev	222	168
25	S. M. Krivoshein	50, 55	219	Kharkov	300	157
26	N. Ya. Kirichenko	52, 56	103	N Caucasus	184	?
27	I. E. Petrov	9, 53	221	Central Asia	356	136
28	V. V. Novikov	6, 54	236	Transcaucasus	869	?
30	V. S. Golubovskiy	58, 60	239	Far East		?
Other		57, 59, 61	69, 82			
Total					15,526	5,239

numbers include flamethrower tanks and other T-26 sub-variants

As of April 1940, Red Army weapons were categorized at five readiness levels: Category 1 (new, unused); 2 (operational, minor repairs); 3 (medium repair needed at unit or district workshops); 4 (capital overhaul needed at special workshops or factories); 5 (retired for scrapping). In the case of the tank units of the Red Army in the western military districts in June 1941 that would bear the brunt of the initial fighting, there were 4,875 T-26 tanks, of which 828 were in Category 1, 3,339 in Category 2, and 708 in Category 3

F

T-26 MODEL 1938, 28TH MECHANIZED CORPS, IRAN, 1941

Tanks of the 28th Mechanized Corps were widely painted in the "Group 3" scheme of 4BO camouflage green with bands of 6K dark brown and 7K earth yellow brown. This camouflage was mostly applied in 1939 before the consolidation of various units into the 28th Mechanized Corps, so the patterns varied widely. In anticipation of the Operation *Compassion* invasion of Iran in August 1941, the usual white invasion cross was painted on the tank roofs. This was a standard Red Army marking for aerial recognition, and had been used on previous foreign operations including the invasion of the Baltic states in 1941.

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A column of T-26 tanks led by a T-26 Model 1938 moves to the front during the fighting in the winter of 1941–42.

or 4. While this suggests that about 85 percent of the T-26s were new or ready for operation, in fact many of the tanks were sidelined due to a lack of spare parts such as track links, and many others had nearly exhausted their number of engine hours. On average, the T-26 tanks in the western military districts had accumulated 75–100 motor hours; a medium overhaul was required at 150 motor hours. This had debilitating consequences in combat. The seven mechanized corps of the Southwestern Front in Ukraine conducted road marches averaging 300–365km in the first nine days of combat from June 22 to June 30, using up 35 to 40 motor hours on their tanks, or about a quarter of their engine life. A typical example was the 10th Tank Division, 15th Mechanized Corps, which started the fighting with 27 T-26 tanks (19 gun tanks and eight flamethrower tanks). In three weeks of fighting, it lost 24 of 27 T-26 tanks with nine combat losses, three missing, and 12 abandoned due to mechanical breakdowns.

The summer battles of 1941 were catastrophic for the Red Army. The older tanks such as the T-26 suffered especially heavy losses. For example, the Southwestern Front in Ukraine, formerly the Kiev Special Military District, started the war with 5,966 tanks, of which 1,955 were T-26 tanks. Of these, 1,326 T-26 tanks were in the six mechanized corps. The great encirclement battles that took place over the next five weeks whittled this down to only 74 T-26 tanks by August 1, 1941.

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Officers of the 6th Tank Brigade discuss plans during the August 1942 fighting on the Southwestern Front on the approaches to Stalingrad. The officer on the far left is a lieutenant colonel and the unit commissar, evident from sleeve star insignia of the Red Army Political Administration. The tanker to the far right is a junior lieutenant, evident from the insignia on the collar. In the background are three T-26 tanks, a T-26 Model 1938 on the left and two T-26 Model 1933s.

The Western Front, formerly the Western Special Military District, started the war with 3,330 tanks, of which 1,389 were T-26s. By October 1, 1941, the Western Front had been reduced to 475 tanks, of which only 298 were T-26s. By October 28, 1941, the Western Front had a strength of 441 tanks but only 50 T-26s. The table below provides a graphic summary of the fighting on the approaches to Moscow in the fall of 1941. By mid-November 1941, the Western Front's tank force had been greatly reduced but for the sudden influx of the Reserve Front from units deep in the interior. Even with these reinforcements, the size of the T-26 force continued to fall compared to the summer. It is worth noting that in October–November 1941, on average only about 47 percent of the Soviet tank force was operational, with the remainder in repair.

The Approaches to Moscow: T-26 Strength on the Western Front

	T-26 operational + repair	T-26 total	All tanks operational + repair	All tanks total	T-26 as percent of force
June 22, 1941	1,165	1,165	1,896	1,896	61%
October 1, 1941	298 + ?	298+	475 +?	475+	63%
October 28, 1941	21 +11	32	315 + 101	416	8%
November 7, 1941	84 + 3	87	519 + 592	1,111	8%
November 15, 1941	21 + 4	25	109 + 145	254	10%
November 15, 1941*	***296 + 12***	***308***	***899 + 988***	***1,887***	***16%***
November 22, 1941	129 + 16	145	600 + 852	1,452	10%
****Arriving Reserve Front reinforcements***					

In total, the Red Army lost about 20,500 tanks in 1941, of which 17,300 were light tanks, including the T-26 and BT tanks. A German evaluation of Soviet tanks in 1942 assessed the T-26 as being weakly protected, well-armed, underpowered, too slow, and obsolete. Although hundreds of operational T-26 tanks were captured, the Wehrmacht had a very low opinion of the type and sent most back to smelters in Germany to recycle their steel.

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The Leningrad Military District still had a small pool of T-26s in service as late as 1944, with 32 tanks in service with the 1st and 220th Tank Brigades. This T-26 Model 1936 was knocked out during the fighting on the Finnish front near Lehmivaara on August 9, 1944. It has many late features such as the P-40 antiaircraft machine-gun mount. (SA-Kuva)

While it might seem that the T-26 had completely disappeared from the scene by the end of 1941, this was not the case. There were substantial inventories of T-26 tanks deeper in the Soviet Union, most notably in the Caucasus and in the Far East. Some of these units were dispatched to the Moscow theater and saw combat in the bitter battles of winter 1941–42.

One of the more obscure campaigns from the summer of 1941 was Operation *Compassion* (Operatsiya *Sochuvstvie*), the Soviet element of the Anglo-Russian invasion of Iran in August–September 1941. The aim was to depose the pro-German Shah in order to provide a route for shipping supplies to the Red Army. The largest tank element of the Red Army contingent was the 28th Mechanized Corps, which contained two tank divisions, both equipped with the T-26 tank, and totaling 869 light tanks and 131

G

1: T-26 MODEL 1938, 55TH TANK BRIGADE, CRIMEAN FRONT, MARCH 1942

This is another example of one of the variations in the Group 3 scheme in a brigade formerly part of the 6th Tank Division, 28th Mechanized Corps, after it had been withdrawn from Iran and reorganized. The base 4BO color of the tank has a pattern of 6K brown bands, along with the battalion/company bands in white. This has been over-painted by a pattern of 7K earth yellow, partly covering the old battalion/company bands.

2: T-26 MODEL 1938, 39TH TANK DIVISION, 18TH MECHANIZED CORPS, UMAN, AUGUST 1941

The formation of the massive mechanized corps in 1941 encouraged the use of tactical markings to distinguish the component divisions and tank regiments. There was no national system for these markings in 1941, and they were usually adopted on the initiative of local commanders. This is an example from one of the tank divisions that served in the Ukraine in the summer of 1941, consisting of a broken white turret band with a number, possibly indicating one of the constituent regiments or subformations.

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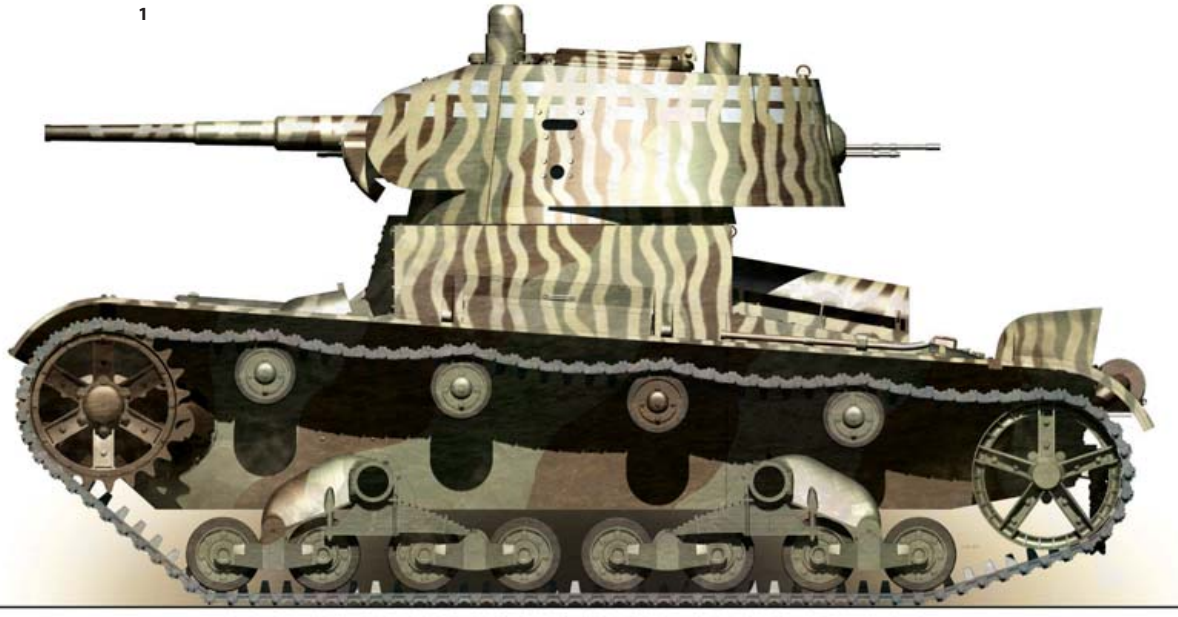

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flamethrower tanks. There were additional tank subunits attached to various rifle and cavalry units. The Soviet advance was not strongly opposed, but the Red Army was plagued by repair problems. After an advance of about 700km in less than a week, about 35 percent of the tanks had broken down and required depot or factory rebuilding. In some units, for example the 24th Tank Regiment, half of the tanks were non-operational after four days of road marches. After the campaign, most of the tanks were rebuilt and sent back to the Transcaucasus Military District. The tank divisions were broken up into small tank brigades. These tank units saw extensive fighting in the summer 1942 campaign in the Caucasus.

The focus of German operations in the spring and summer of 1942 was the southern front, with the Wehrmacht launching Plan *Blue* (Fall *Blau*). This assault intended to secure the Crimea and seize the oilfields of the Caucasus. The scale of the tank battles in the sector near the Black Sea was not as large as the titanic summer battles of 1941. The Red Army still had reserves of old T-26 tanks available. For example, by the time of the Kerch battles in March 1942, the Red Army had 225 tanks in the Crimea, of which 172 were T-26 light tanks. However, the Red Army began committing its new tank corps on the approaches to Stalingrad, and the T-26 largely disappeared. So during the fighting in late August 1942 on the Southeastern Front, there were only six T-26s out of some 220 Soviet tanks; by September 1942 there were none. There were no T-26s in Soviet tank units of the Stalingrad Front by October 1942.

The T-26 appeared in dwindling numbers on other fronts. In 1944 there were 424 T-26s still in inventory, of which 35 were at the front, 213 were in rear-area military districts for training, and 176 were in repair plants. These figures do not include the Far Eastern Front as detailed below. On the isolated Leningrad Front, small units of T-26 tanks continued to appear well into the 1944 campaign. Although Plant No 174 was evacuated from the city, there were enough spare parts that over 100 T-26 tanks were built in the late summer and fall of 1941. In January 1944, during the final offensive to liberate Leningrad, the 3rd Company of the 220th Tank Brigade had 27 T-26 tanks. This unit saw fighting against Finland in the summer of 1944.

Captured T-26 Tanks in Combat

Finland purchased 34 Vickers 6-Ton Tanks, and these saw combat service in the 1940 fighting. The Finnish captured numerous T-26 tanks and their derivatives during the 1939–40 Winter War. The Vickers 6-Ton Tanks were modernized by rearming them with captured Soviet 45mm tank guns, and they were sometimes called T-26E. As of May 31, 1941, the Finnish Army had 26 Vickers light tanks, ten T-26 Model 1931s, 20 T-26 Model 1933s, four T-26 Model 1938s, OT-26 flamethrower tanks, and four OT-130 flamethrower tanks. These saw extensive fighting in Karelia in the summer 1941 battles. Additional Soviet T-26 tanks were captured in the summer 1941 fighting and afterwards. The Finnish Army recognized the shortcomings of the T-26 in terms of firepower and protection, but even as late as July 1943, more than 120 Vickers and T-26 light tanks were in service, making up the bulk of the Finnish tank force. When the Red Army launched its summer 1944 offensive in Karelia, the Finnish Army still had 87 T-26 tanks in service, and 25 were lost in the summer fighting. The Finnish T-26 remained in service in dwindling numbers after the war.

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The Finnish Army rebuilt many of its T-26s from damaged tanks. This particular T-26 was rebuilt on the chassis of a flamethrower tank, as is evident from the location of the turret on the right side. Some Finnish T-26s also had an added hull machine-gun station, as seen on this tank. (SA-Kuva)

Germany captured thousands of T-26s in 1941, but regarded the type as obsolete and mechanically troublesome. A small number were retained for use by rear-area security and police units under the designation PzKpfw 740(r) or T-26(r). By the end of 1941, only 16 T-26(r) tanks had been repaired and issued to security units. They continued to be used in small numbers through the war. Panzerjager Abt. 563 built about ten improvised tank destroyers on captured T-26 chassis, replacing the turret with a 75mm PaK 97/38. Some of Germany's eastern allied armies made limited use of captured T-26 tanks. The Romanian army had 33 T-26 tanks in service in November 1942.

The Final Battle: 1945

The last stronghold for the T-26 was in the Soviet Far East. The T-26 was still a viable tank when facing the poorly equipped Japanese Army. Compared to the start of the war in 1941, when there were about 3,000 T-26s in the Far East, by August 5, 1945, there were still 1,461 T-26s in the region, of which 1,272 were in service and the rest undergoing repair. The T-26 was the most common tank type in the region next to the T-34. In 1944–45, the Baikal military district created 55 armored transporters using obsolete T-26 tank chassis that served with the mechanized infantry elements

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The Finnish Army continued to use captured T-26 tanks well into 1944 in spite of their growing obsolescence. This is R-124, a T-26-1 Model 1939 at a parade for Marshal Mannerheim at Enso on June 4, 1944, followed by a T-50 infantry tank. (SA-Kuva)

of the 10th Mechanized Corps. A widened track grouser (*Spetstrak*) was also developed and manufactured locally to improve T-26 traction in soft soil. During the August 1945 offensive by the 1st Far East Front against the Japanese Army in Manchuria, the T-26 served in the 10th Mechanized Corps, in 11 tank brigades, and in one independent tank regiment totaling 347 T-26 tanks and 55 armored transporters.

After the war, in December 1945, there were still some 1,455 T-26 tanks in the Far East. On April 2, 1947, Moscow ordered that the local commands preserve two complete examples of each obsolete tank type for display at army museums, while the remaining inventory of T-26 tanks was placed at the disposal of the civilian economy for scrapping or secondary uses. This ended the use of the T-26 by the Red Army.

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FURTHER READING

There are no detailed histories of the T-26 in English, but there is very extensive and expanding coverage in Russian. Data on T-26 use in Spain came from the Russian State Military Archive Collection (RSMAC-Group 1670) in the Manuscript and Archives branch of Sterling Memorial Library at Yale University. Data on T-26 strength came from a variety of sources including the Soviet General Staff document collection Sbornik boevykh dokumentov VOV: Vypusk 33, which contains surviving reports of the mechanized corps in 1941. Another excellent source on Soviet tank actions in the opening phases of World War II are the numerous volumes of Voennaya Letopis (Military Chronicles) edited by Ilya Moschanskiy, and the Frontovaya Illustratsiya series edited by Maksim Kolomiets. The author also consulted the many fine Russian military history magazines including *Tekhnika i vooruzhenie*, *Poligon*, *Bronya*, and *BTV*, as well as several T-26 technical manuals.

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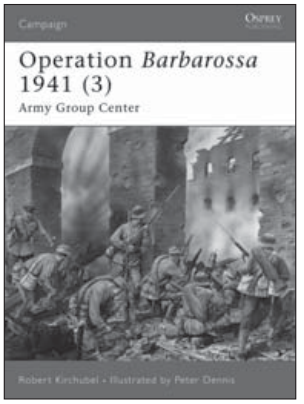

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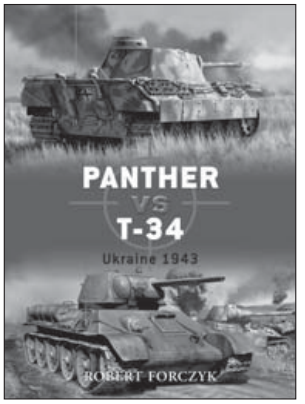

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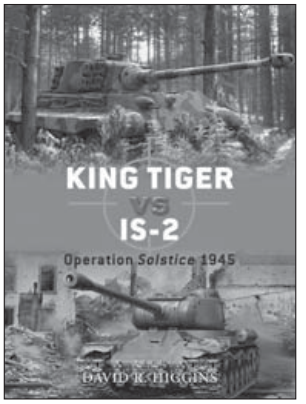

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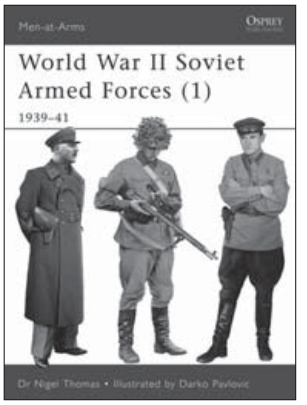

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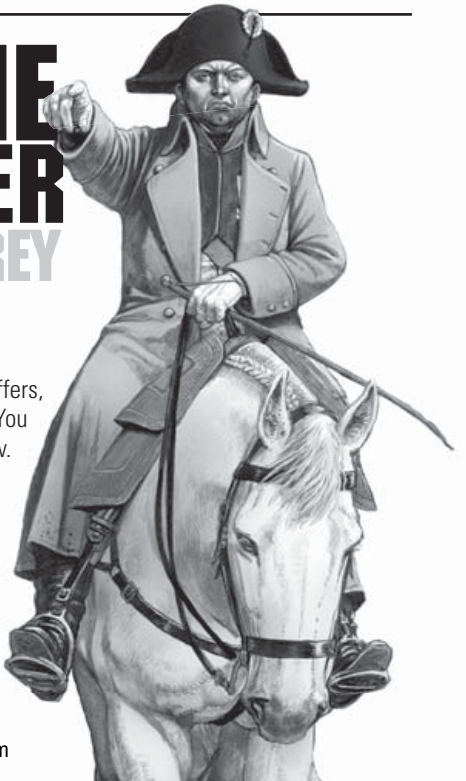

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GLOSSARY

DT	Degtyarev tankoviy: Degtyarev tank machine gun
KhT	Khimicheskiy tank: Chemical (flamethrower) tank
NII	Nauchno-ispytatelniy institut: Research and Development Institute
OAT	Orudiyno-arsenalniy trest: Armament Arsenal Trust
OKMO	Opytniy konstruktorsko-mekhanicheskiy otdel: Experimental Mechanical Design Department (Plant No 174)
OT	Ognemetniy tank: Flamethrower tank
RVS	Revolyutsionno-voenniy sovet: Revolutionary Military Council
ST	Saperskiy tank: Engineer tank
SU	Samokhodnaya ustanovka: Self-propelled (artillery) mount
STZ	Stalingradskiy traktorniy zavod: Stalin tractor plant
TsLPS	Tsentralnaya laboratoriya provodnoy svyazi: Central Laboratory for Radio Guidance
TT	Teletank: Remote control tank
TU	Tank upravleniya: Radio command tank
UMM	Upravlenie mekhanizatsii i motorizatsii: Mechanization and Motorization Directorate, later GABTU